

FIG. 2

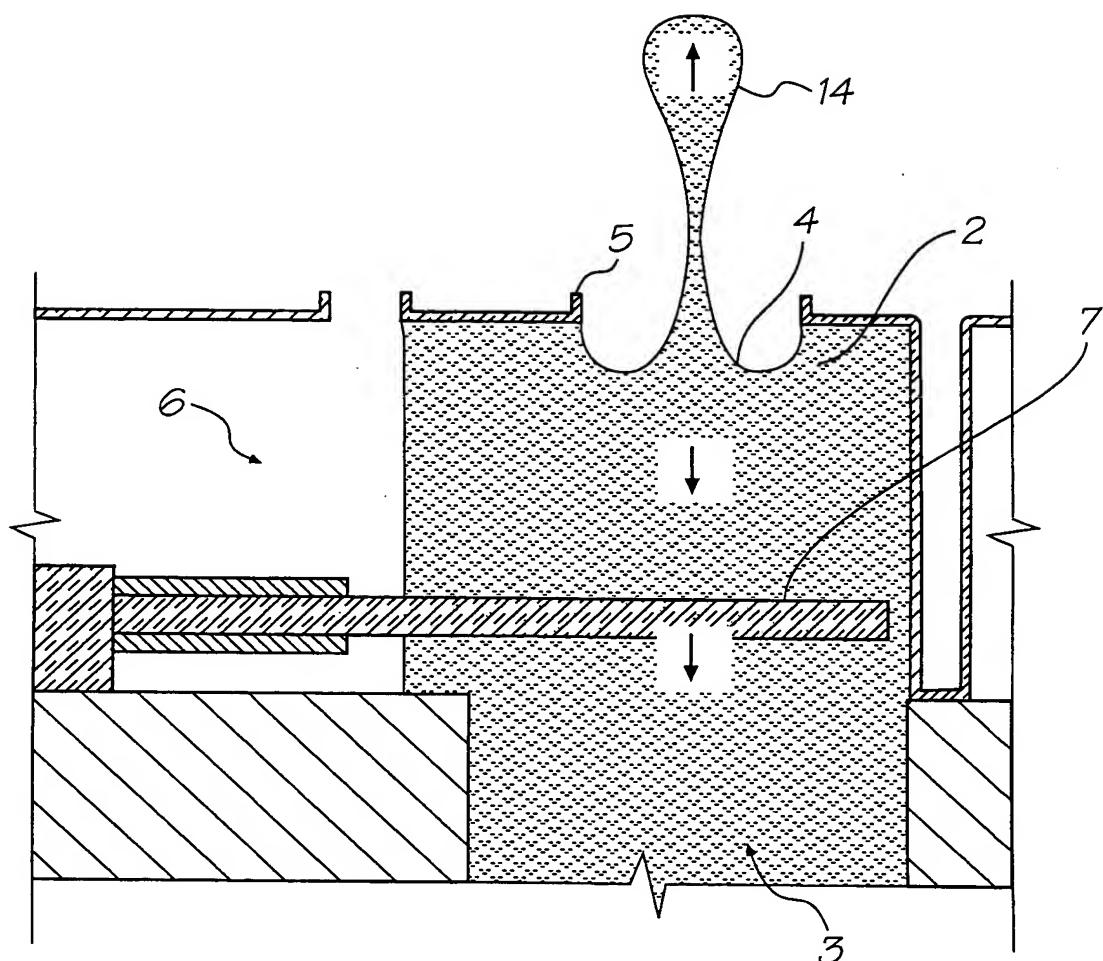


FIG. 3

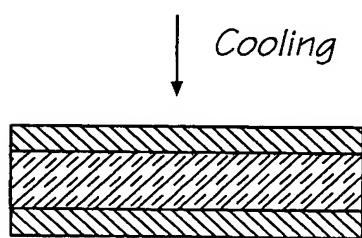
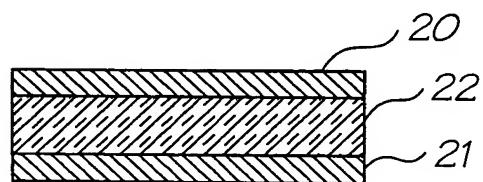


FIG. 4

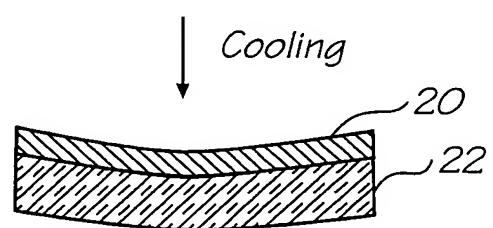
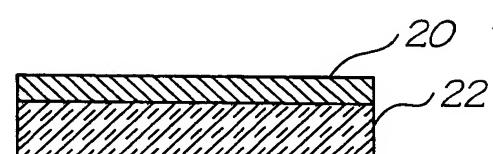
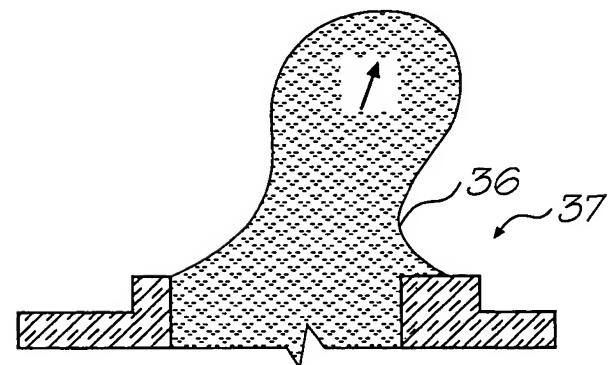
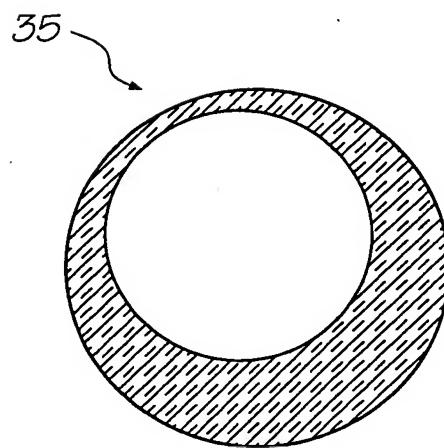
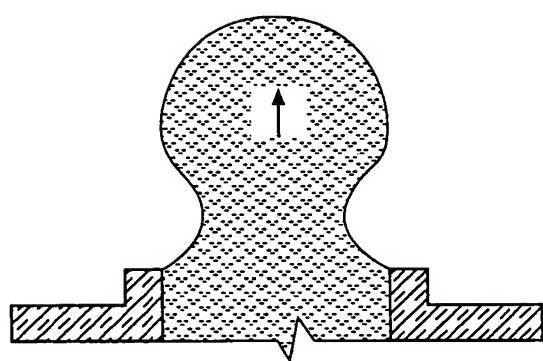
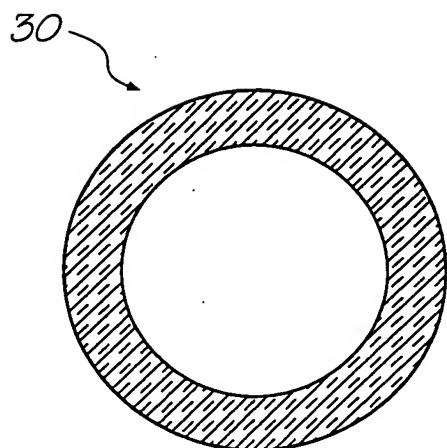


FIG. 5



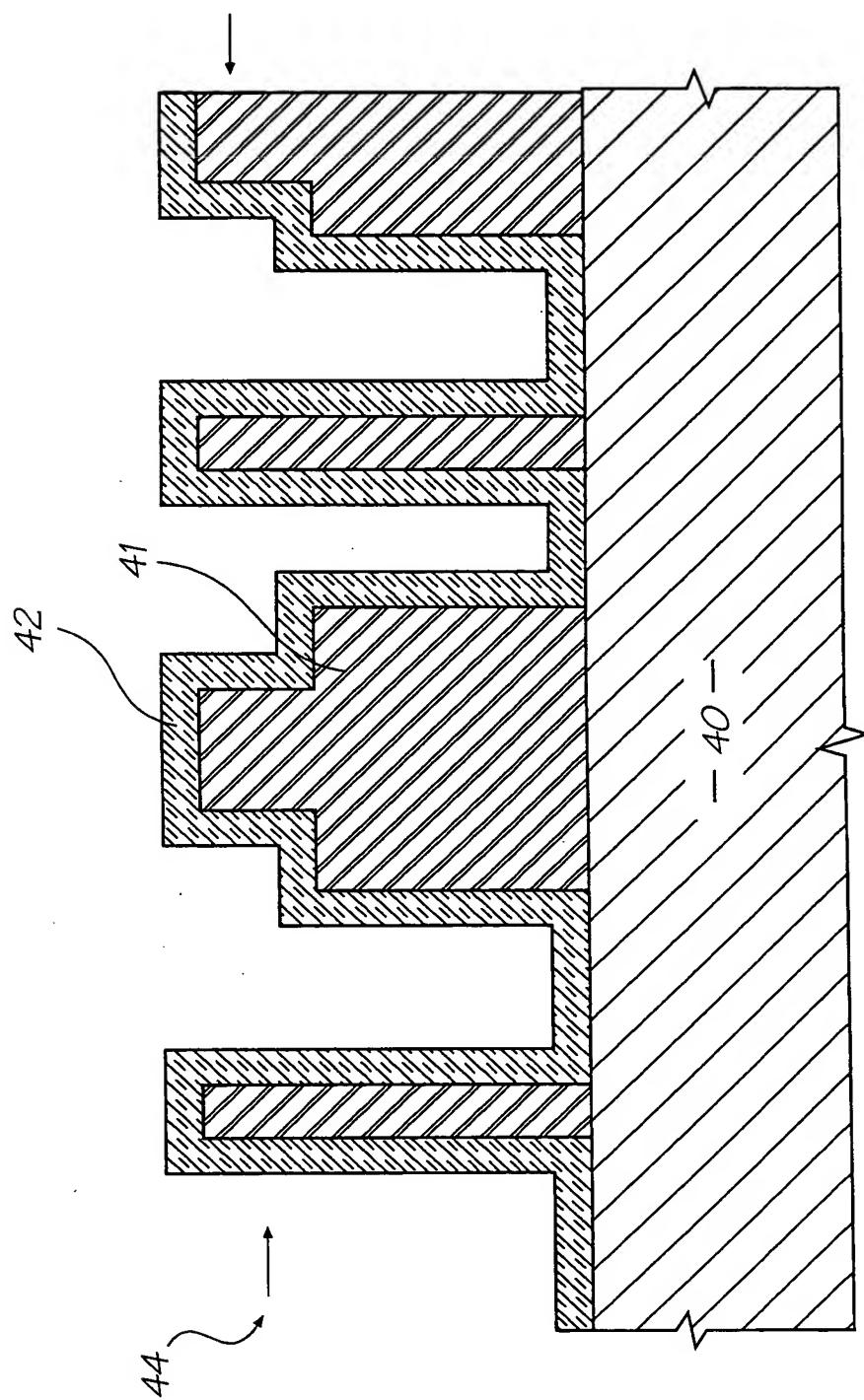


FIG. 10

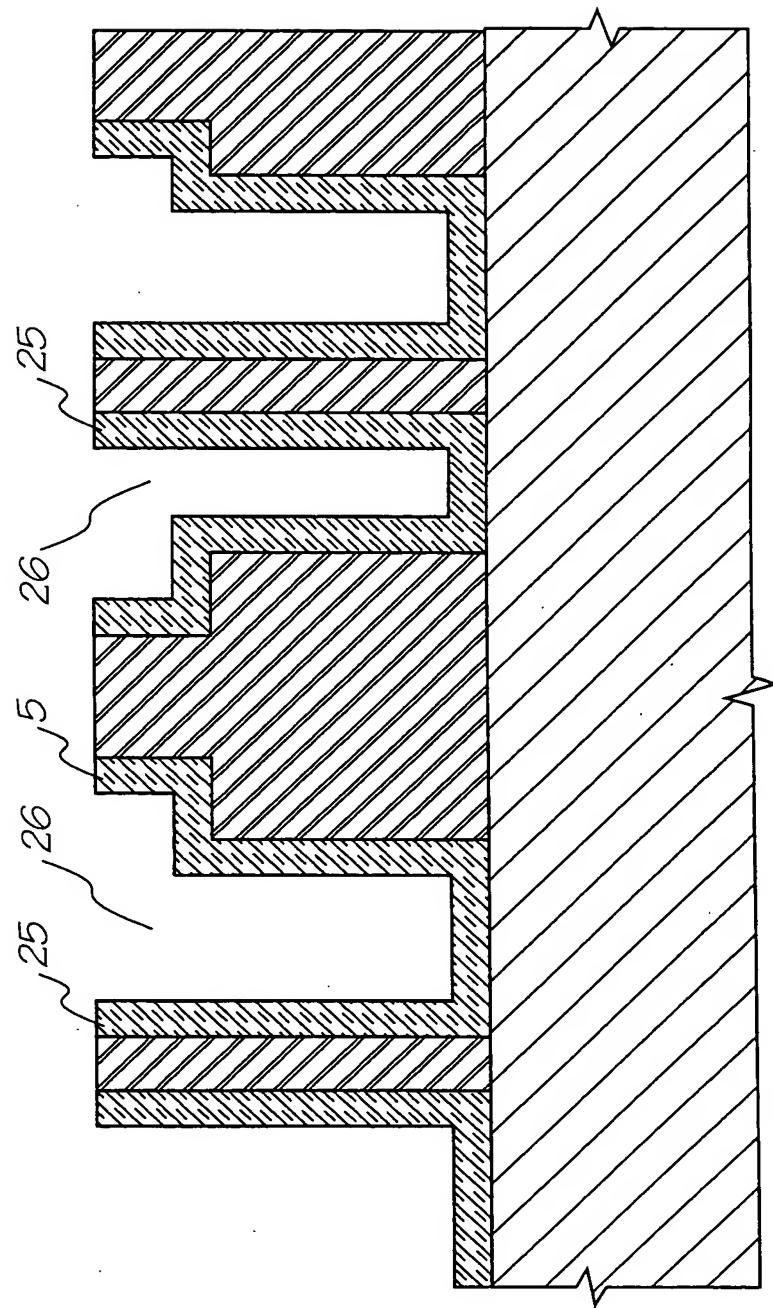


FIG. 11

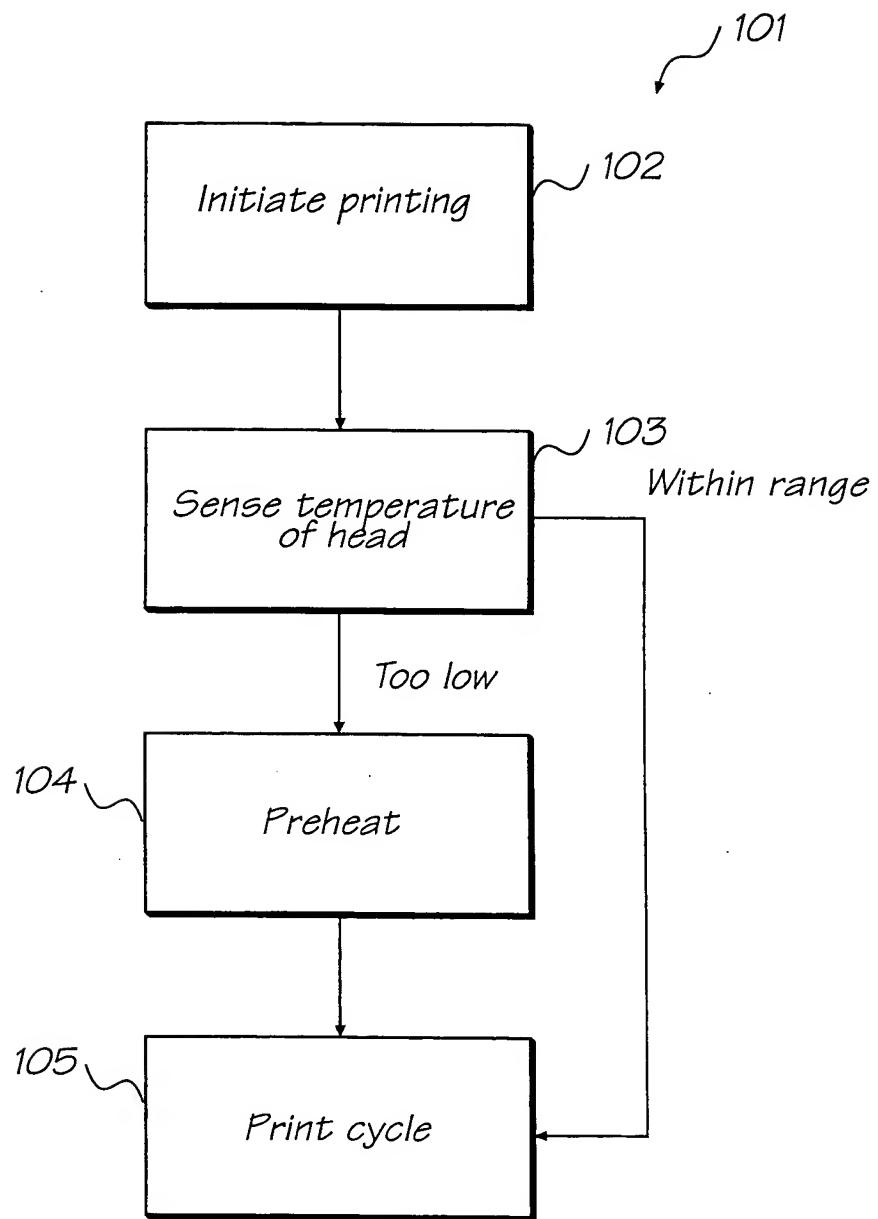


FIG. 12

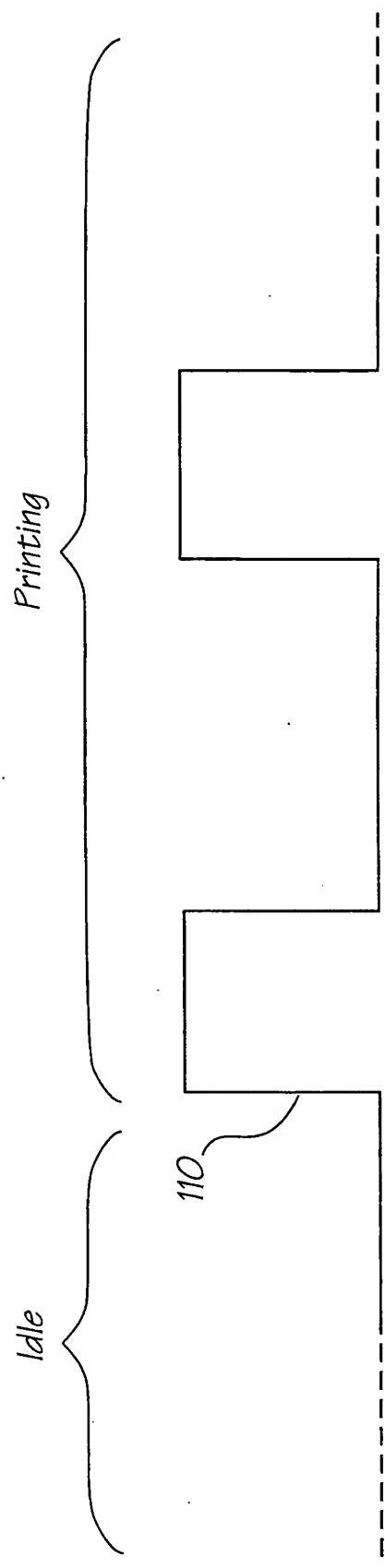


FIG. 13

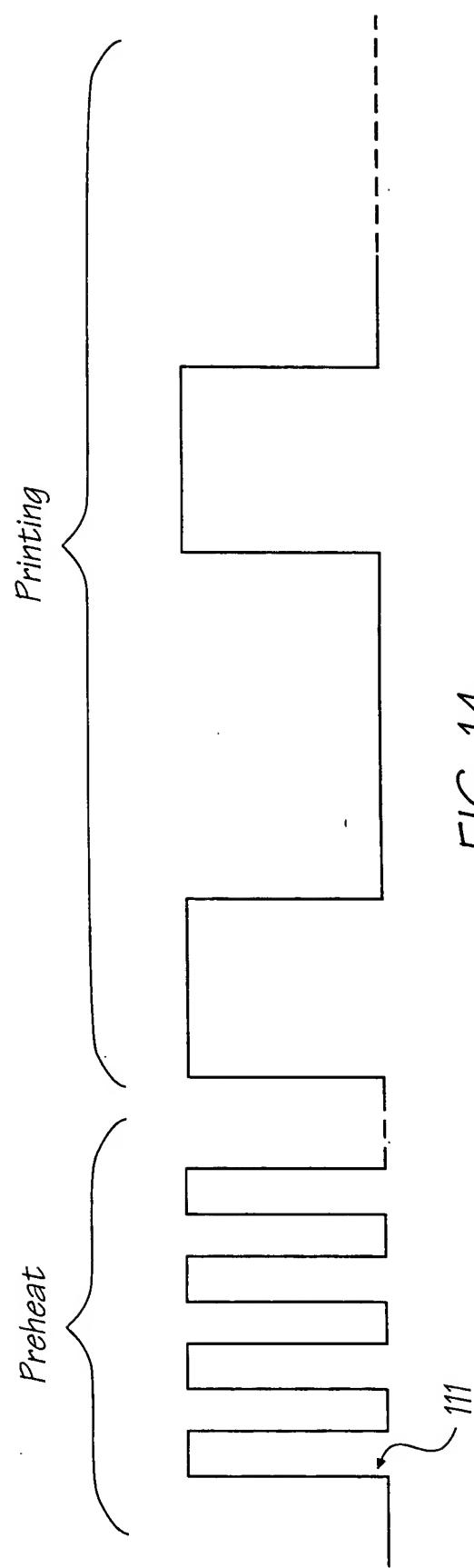


FIG. 14

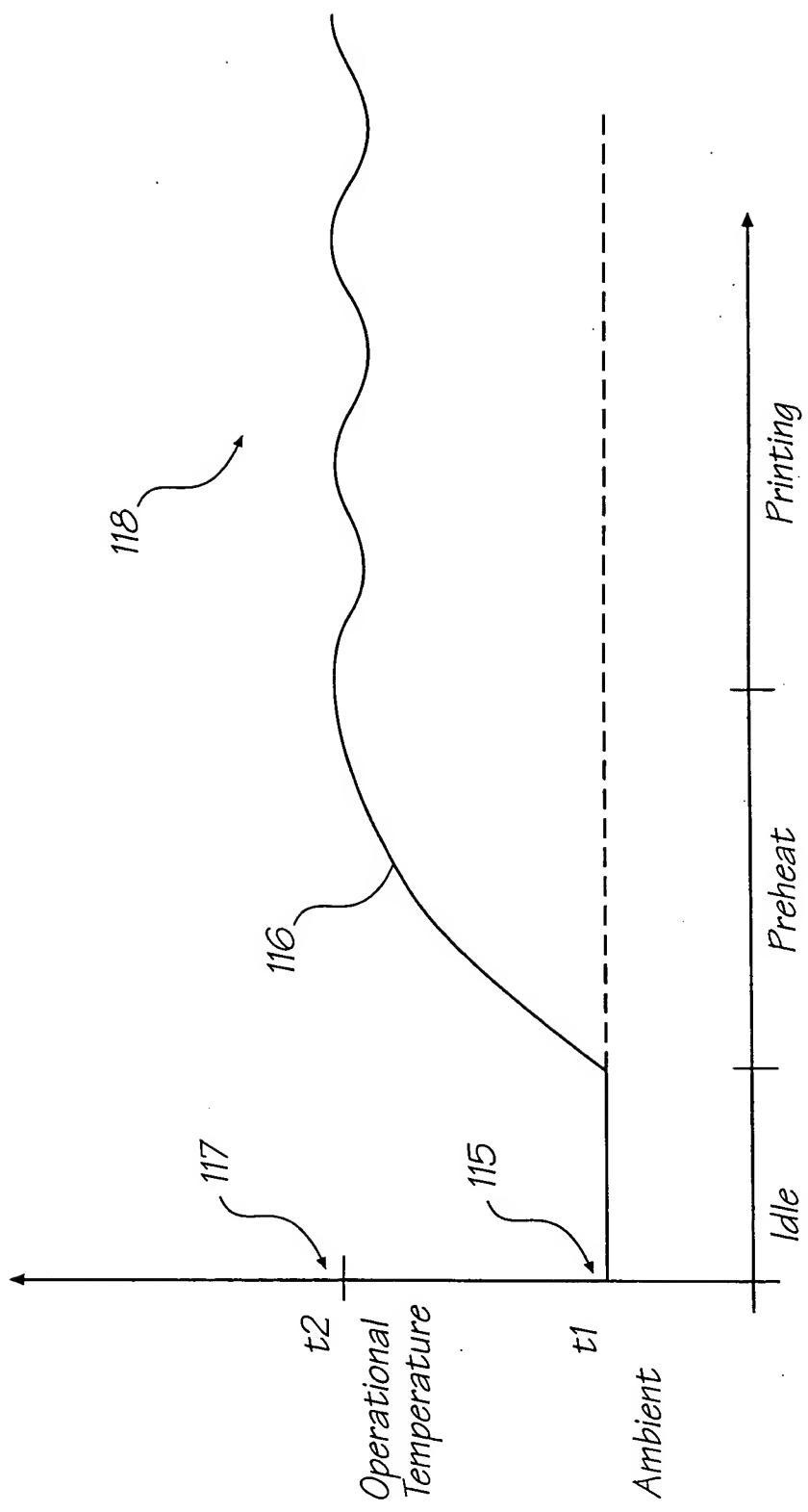


FIG. 15

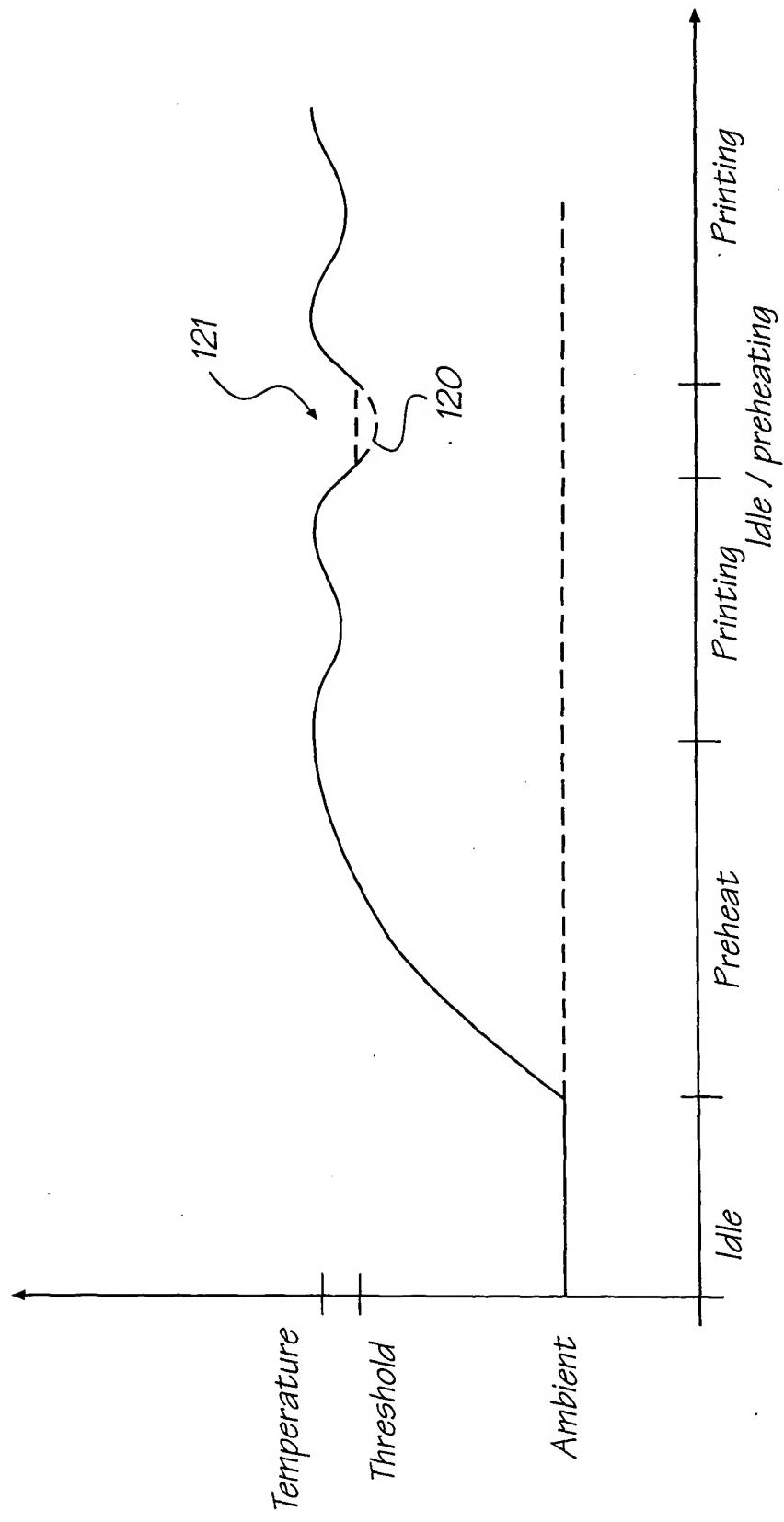


FIG. 16

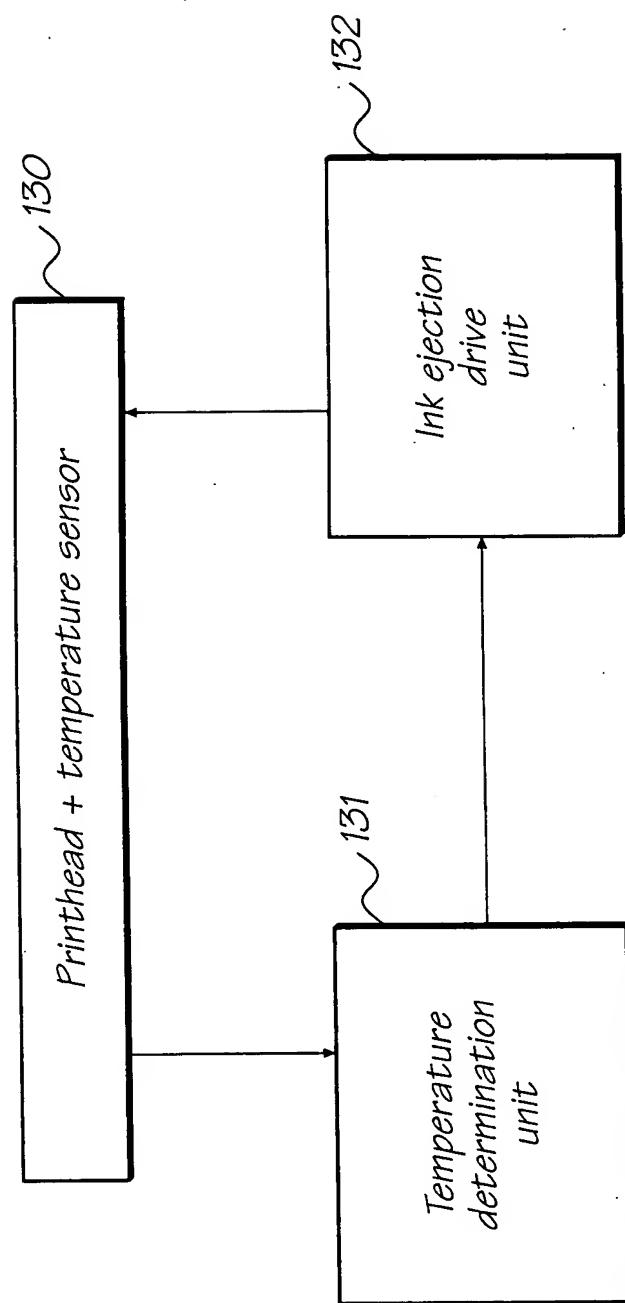


FIG. 17

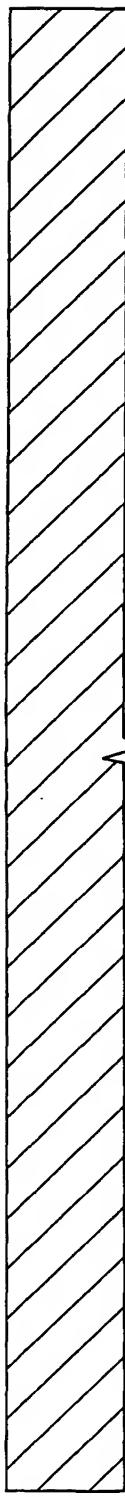
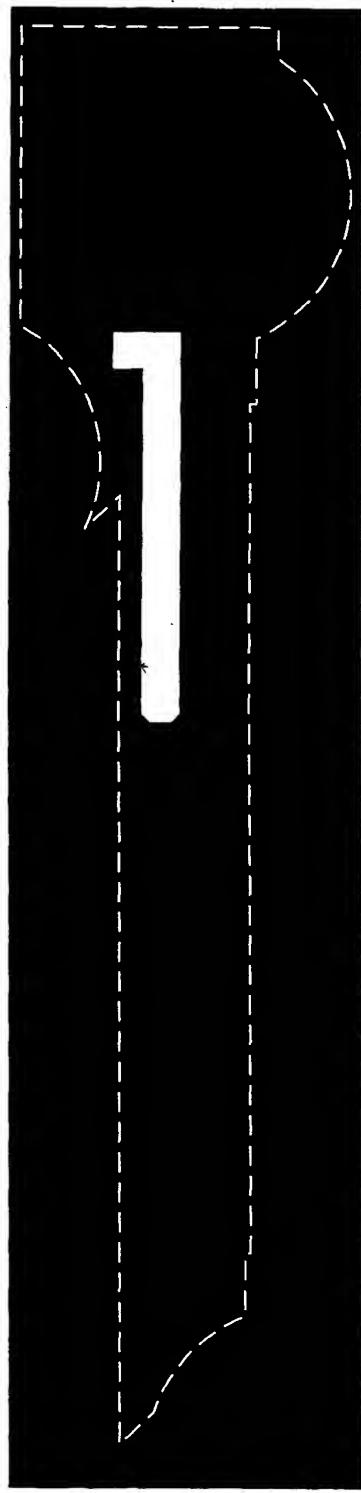
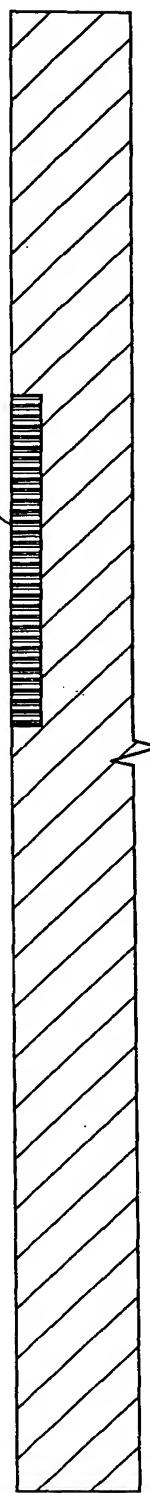


FIG. 18



210



Implant N-Well

FIG. 20

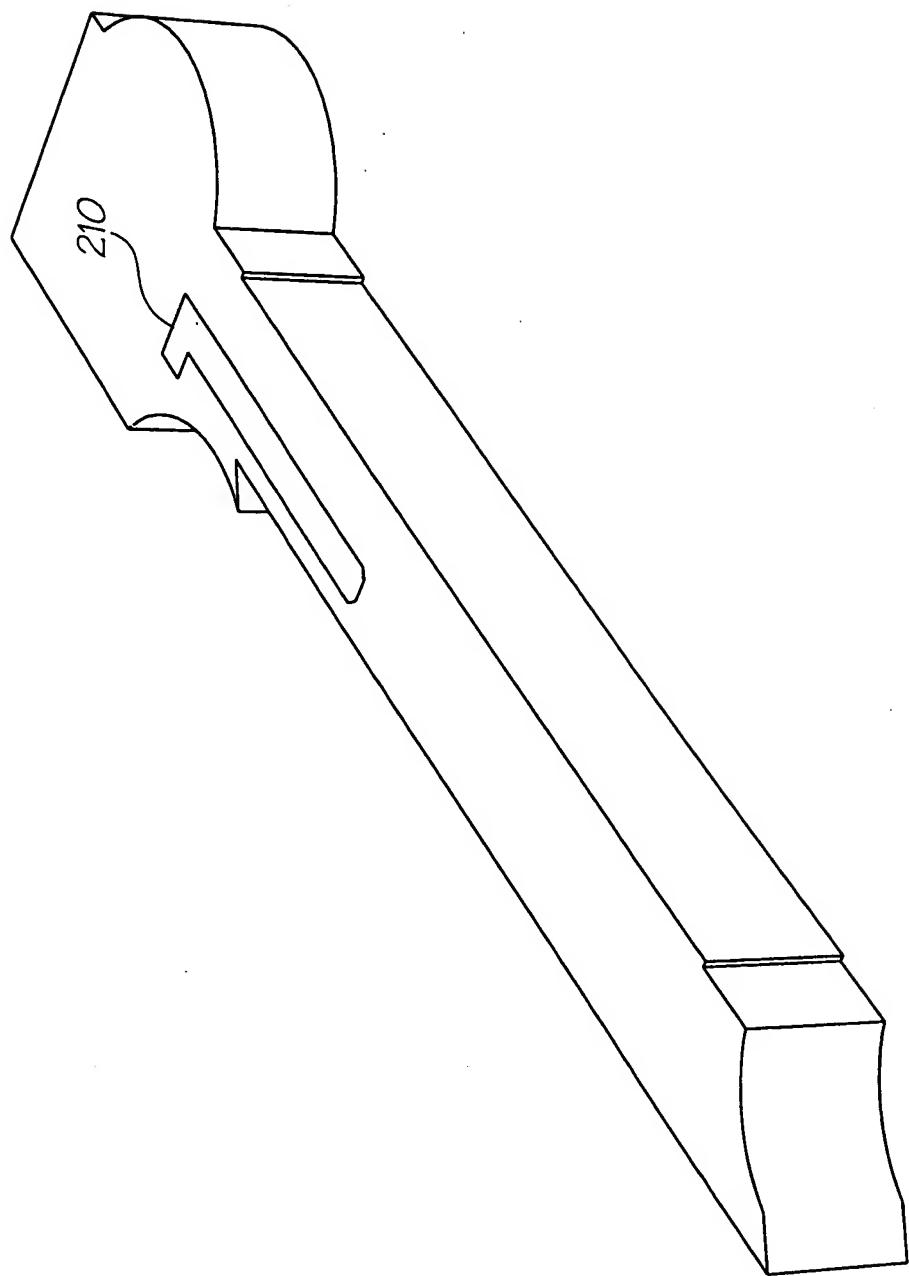
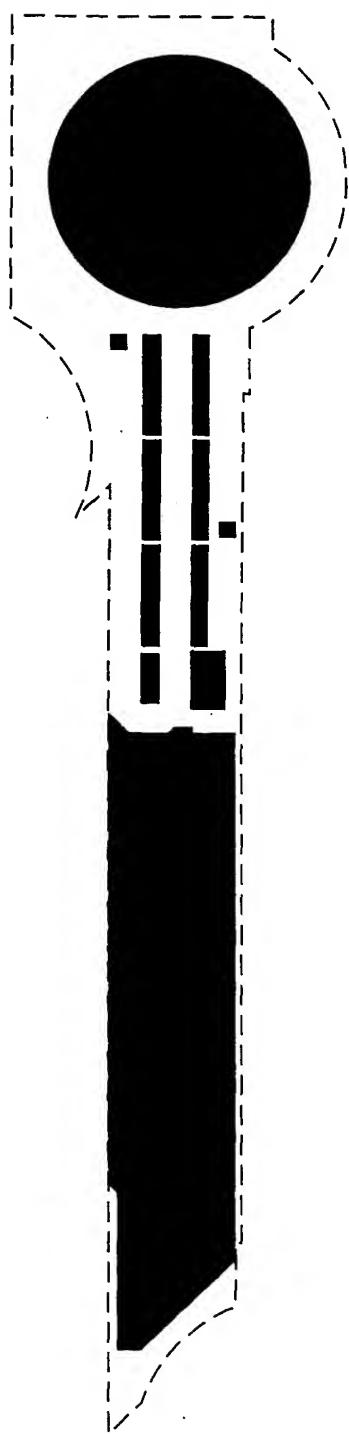
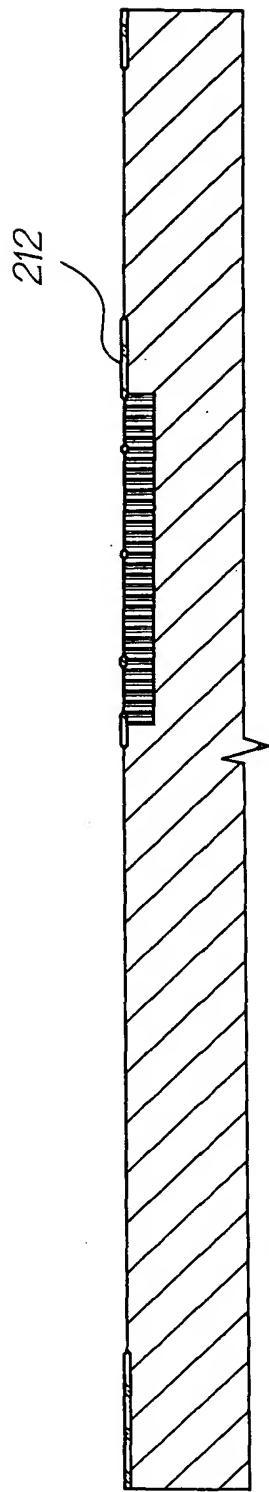


FIG. 21



*Active mask*

*FIG. 22*



*Grow field oxide*

*FIG. 23*

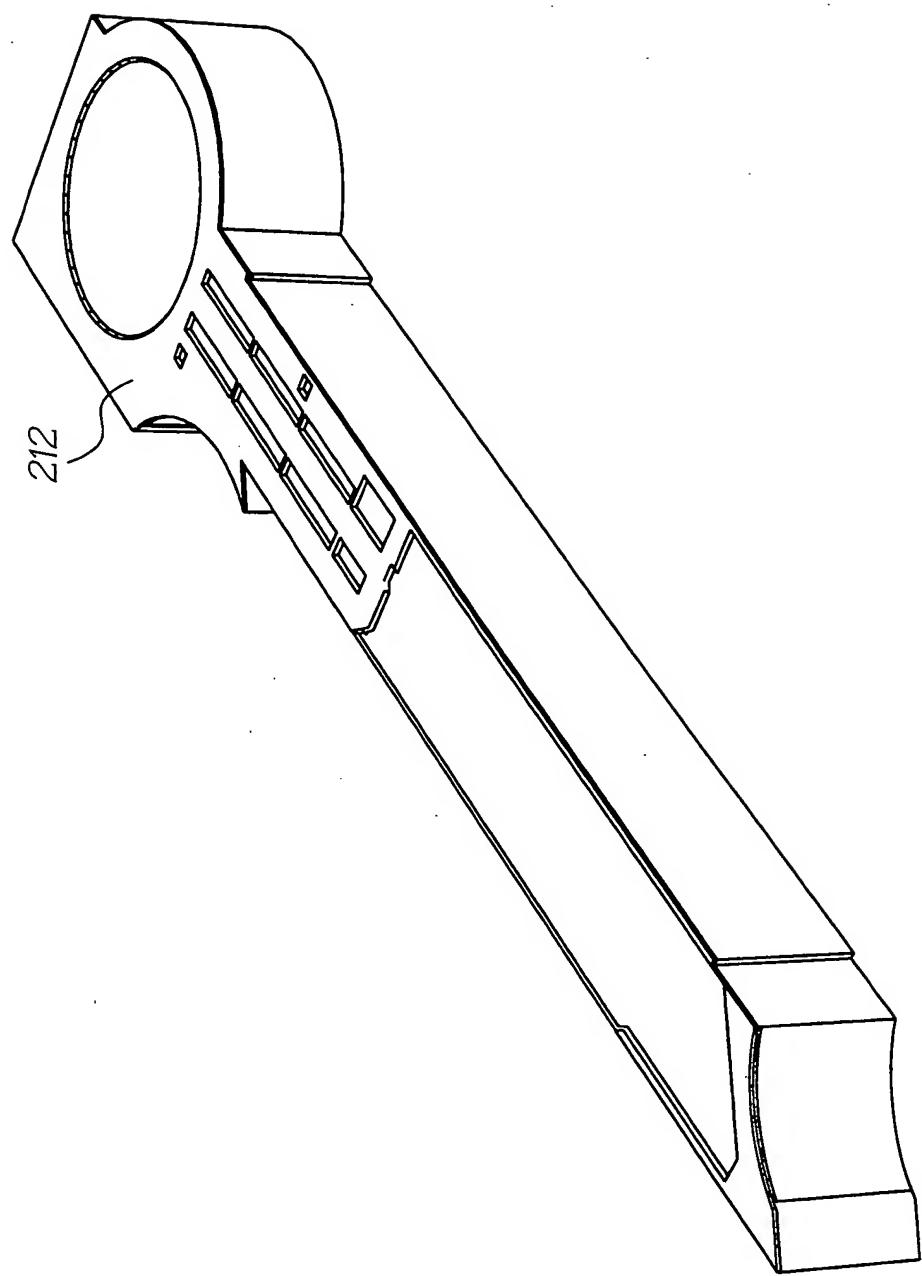
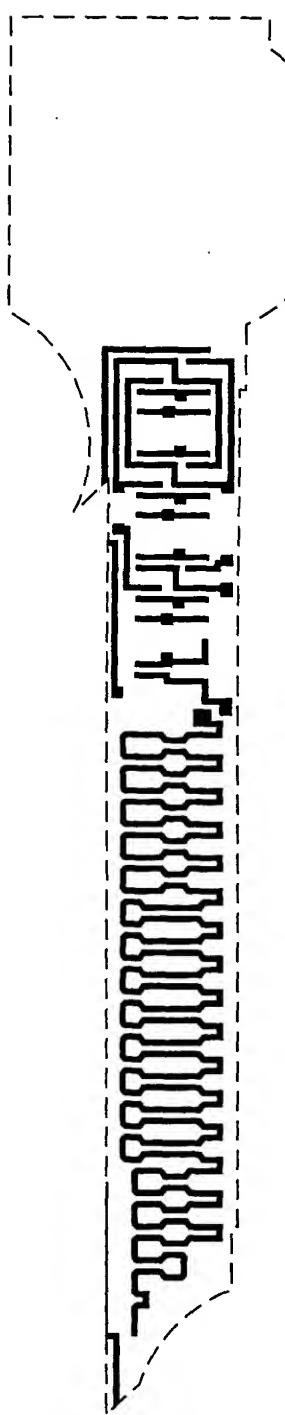
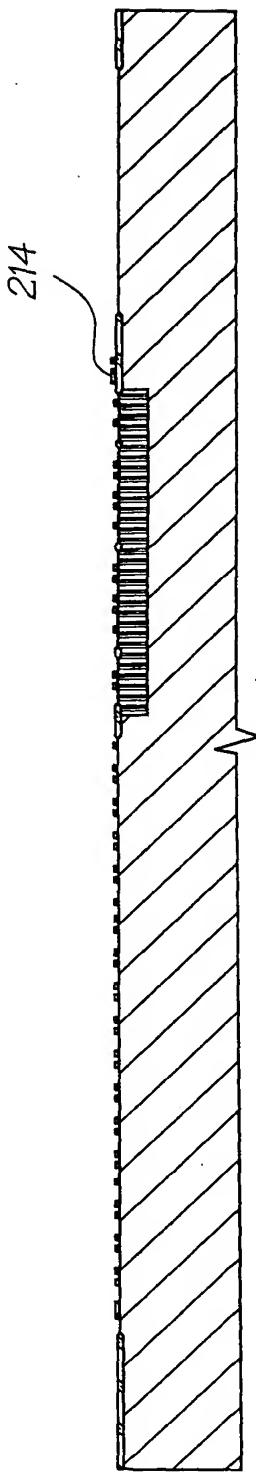


FIG. 24



Poly mask

FIG. 25



Deposit poly

FIG. 26

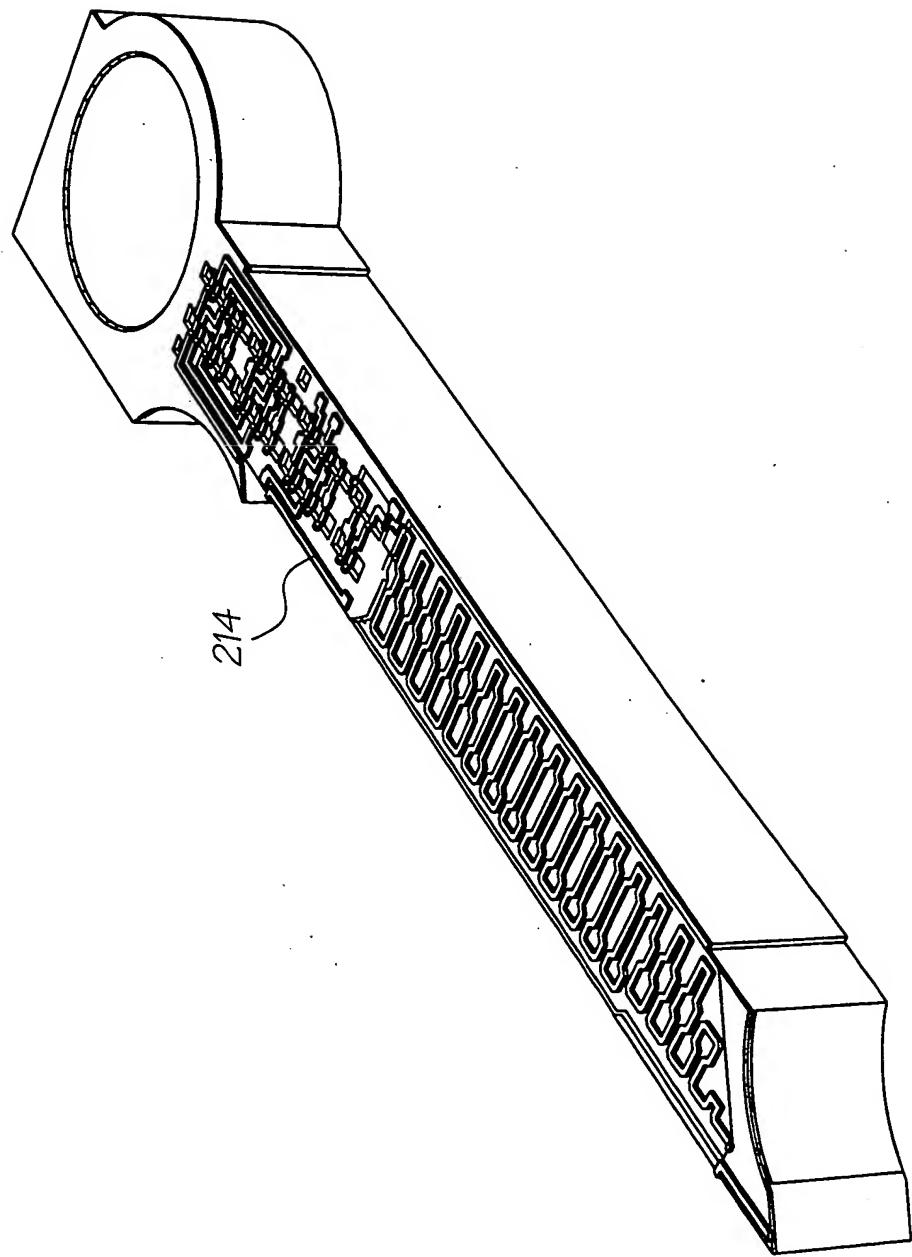
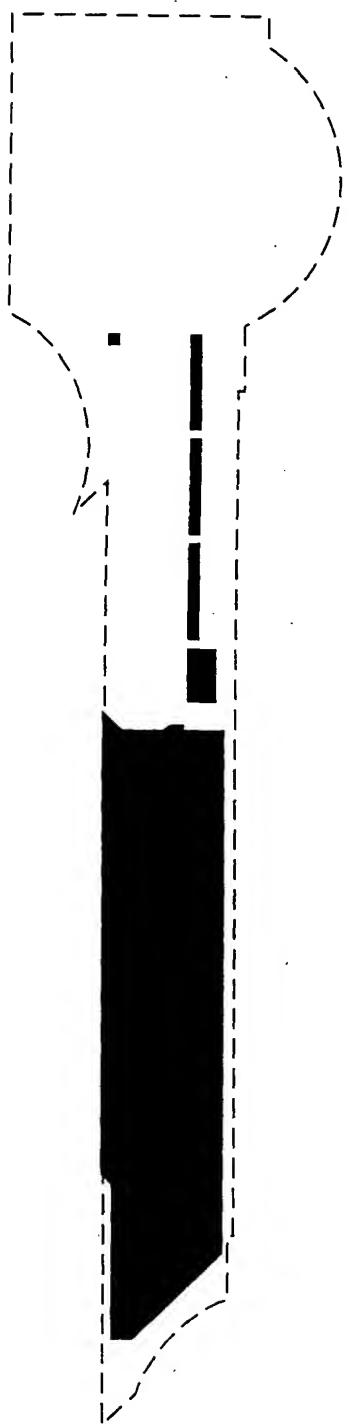
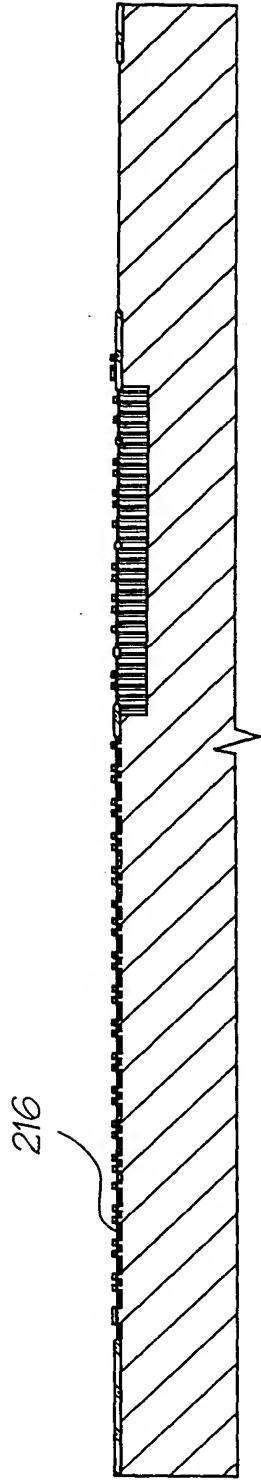


FIG. 27



*n+ mask*

*FIG. 28*



*n+ implant*

*FIG. 29*

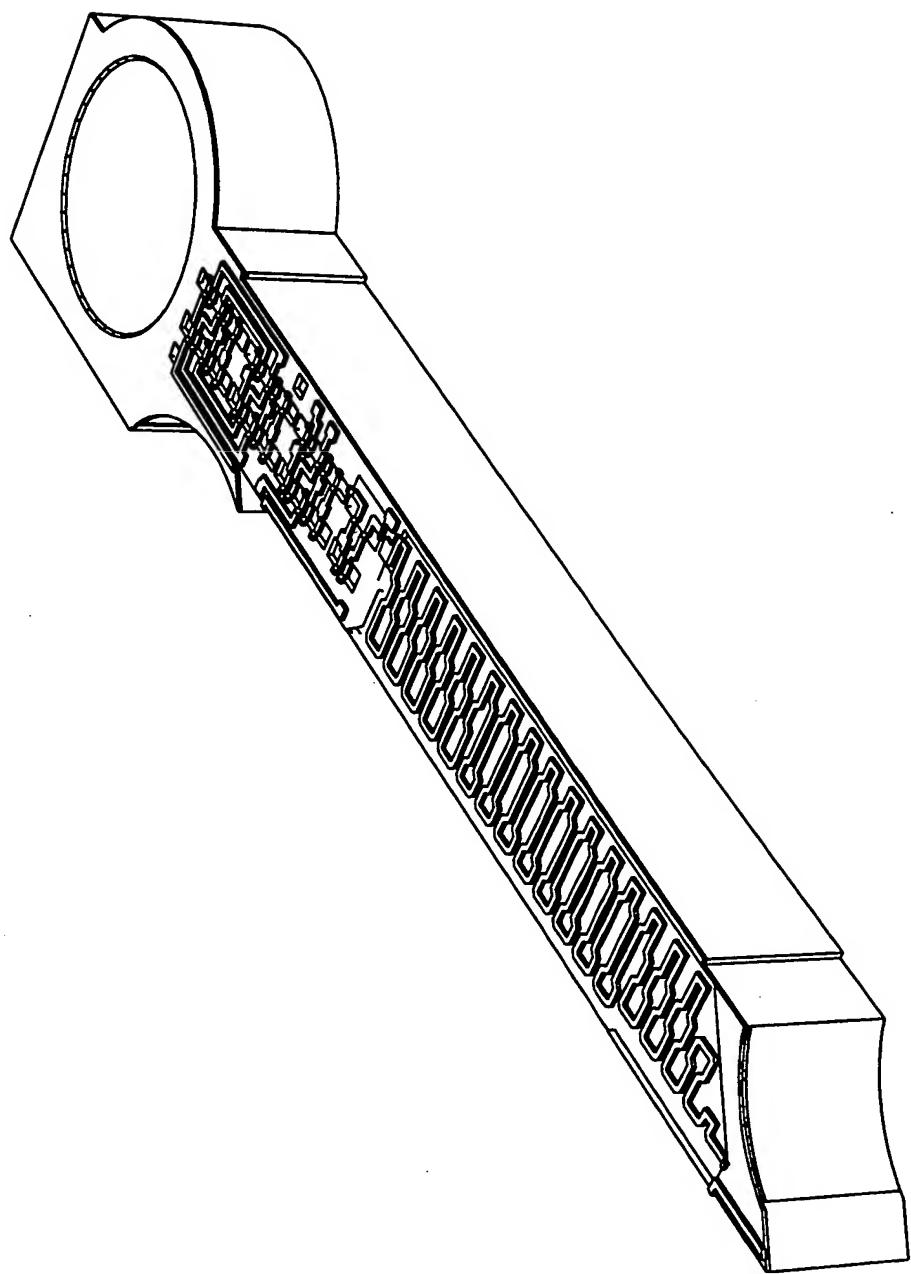
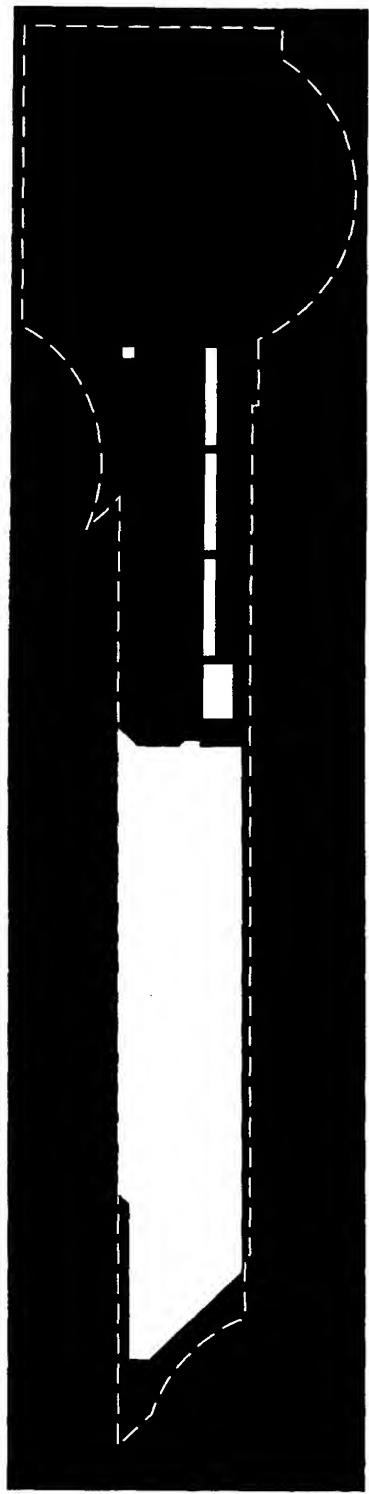
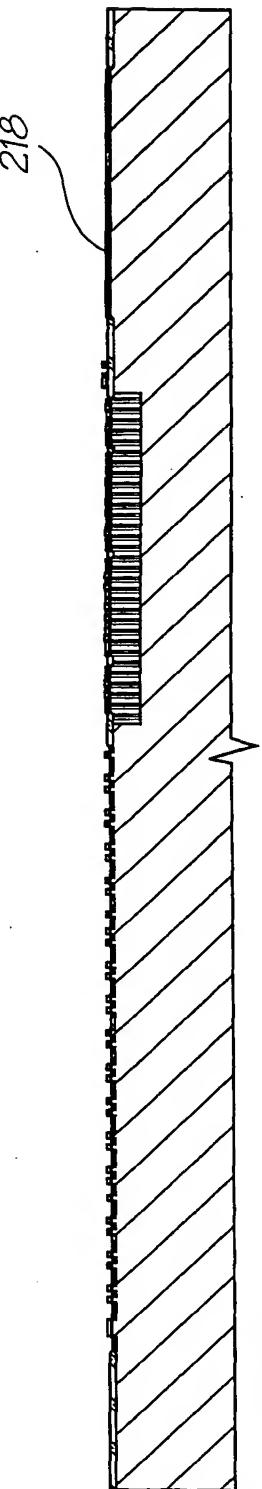


FIG. 30



*p+ mask*

*FIG. 31*



*p+ implant*

*FIG. 32*

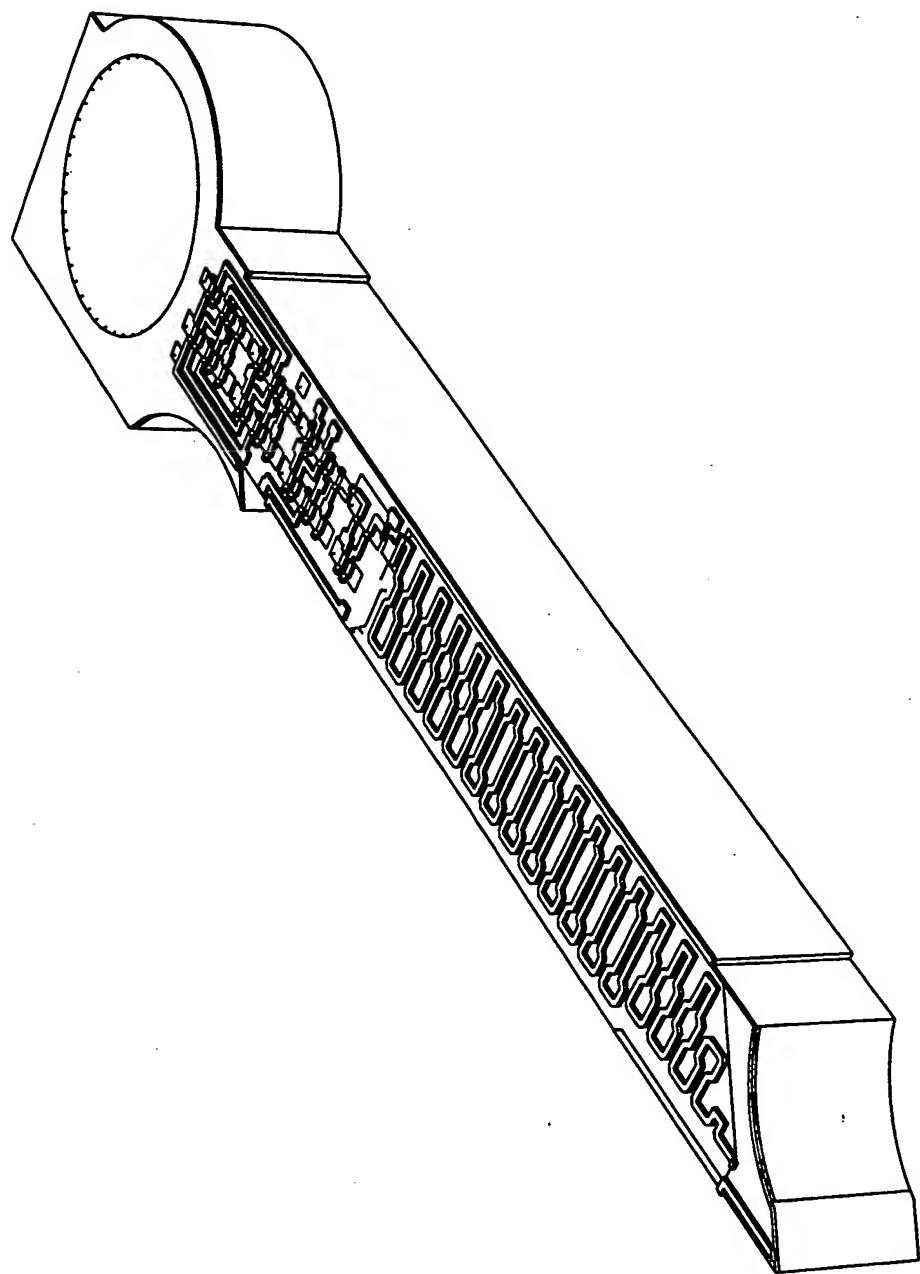
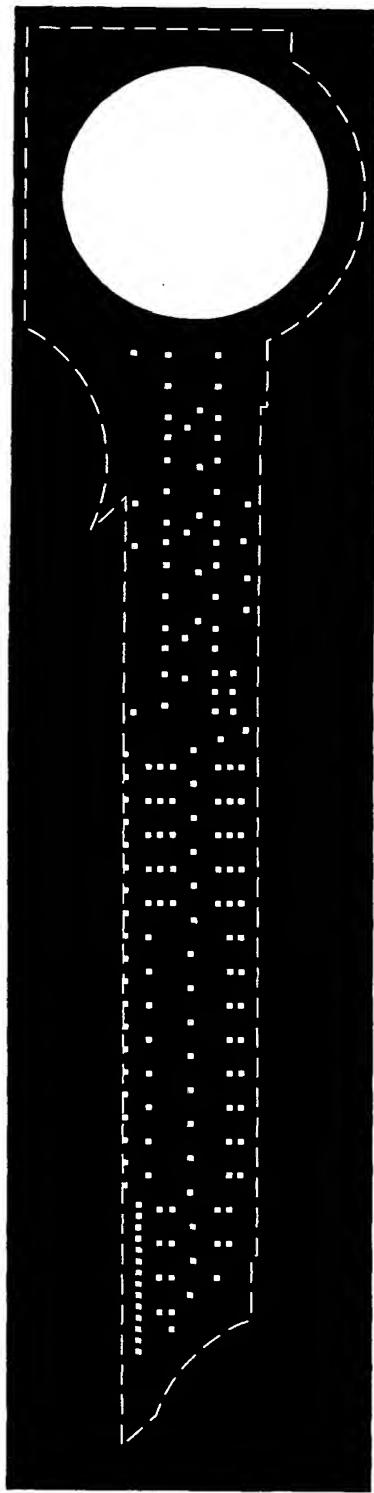
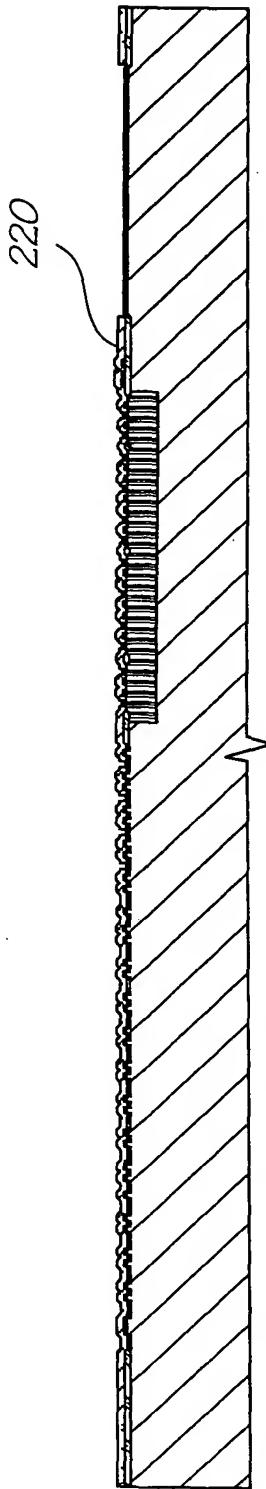


FIG. 33



*Contacts mask*

*FIG. 34*



*Deposit ILD 1, etch contacts*

*FIG. 35*

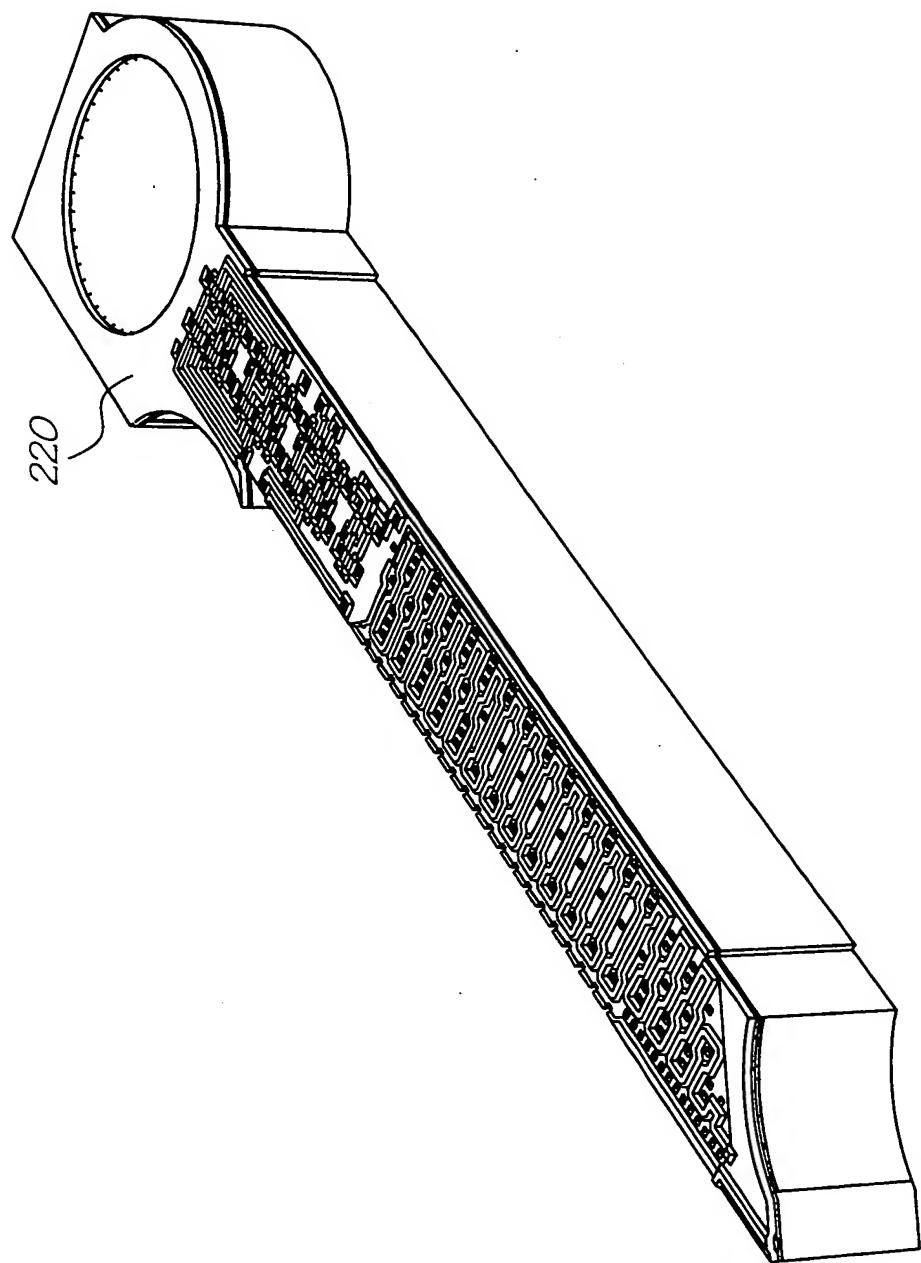
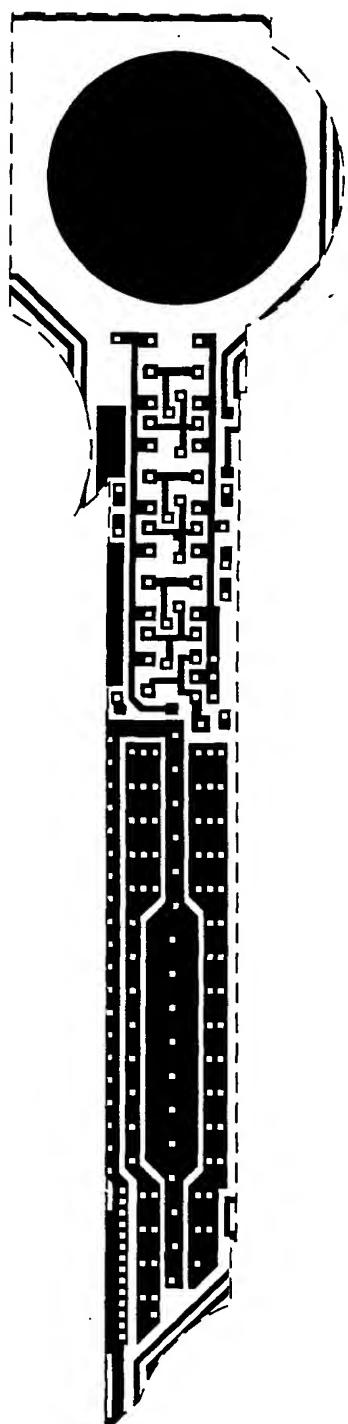
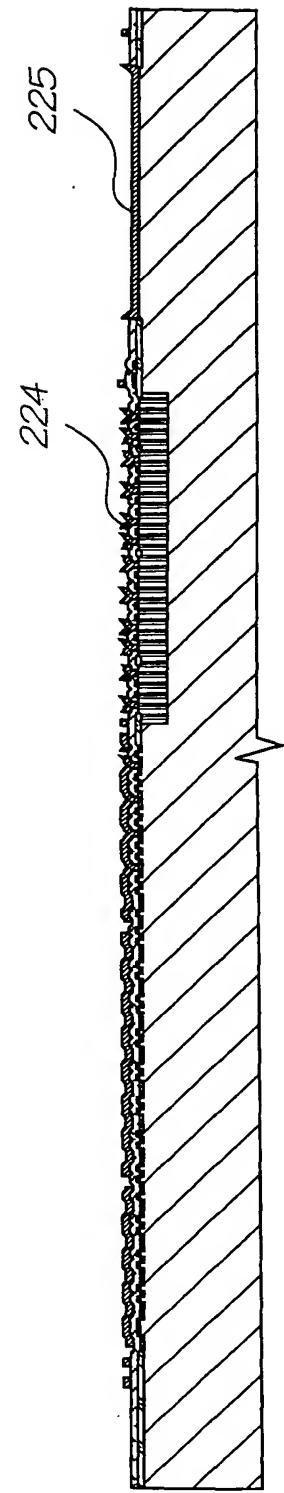


FIG. 36



Metal 1 mask

FIG. 37



Deposit Metal 1

FIG. 38

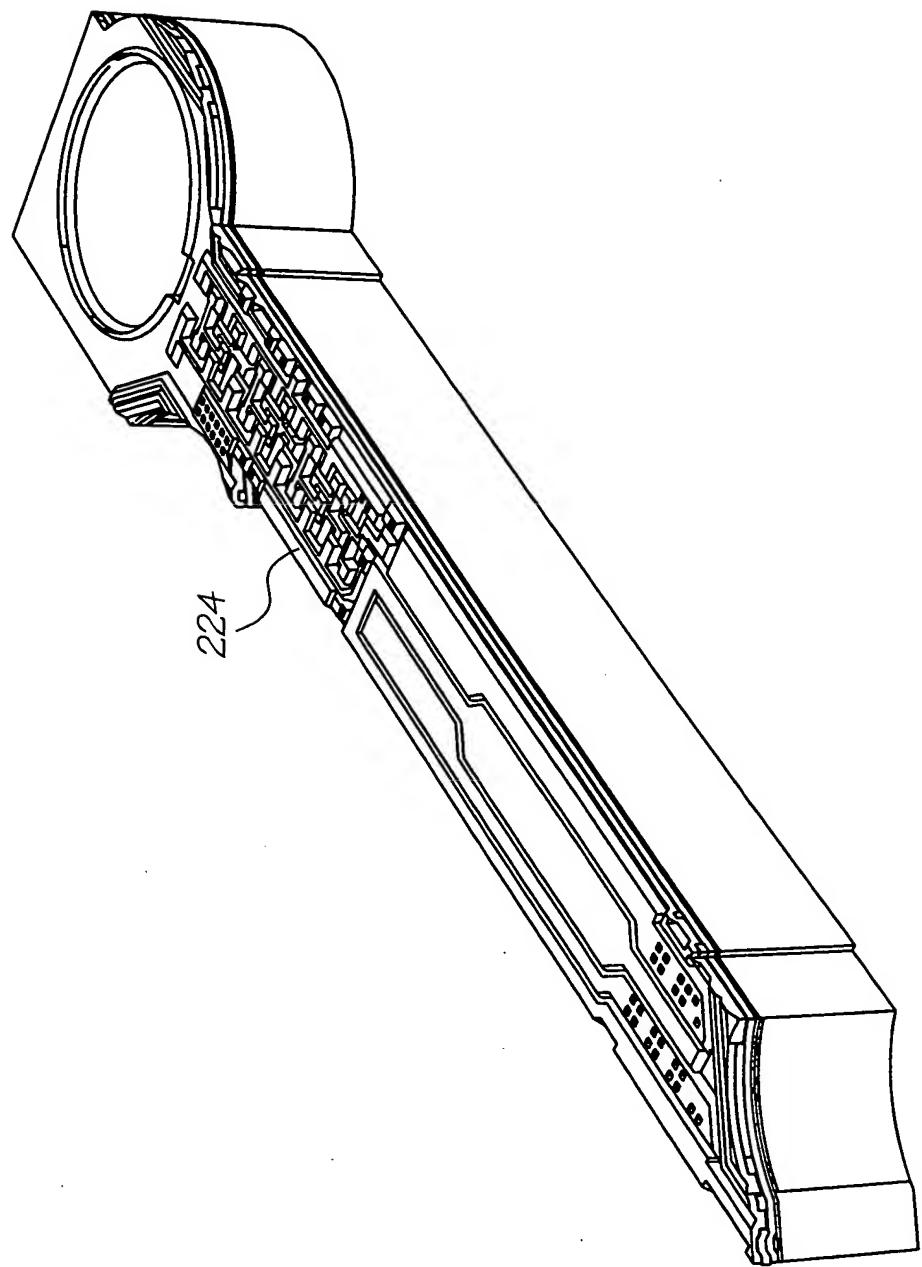
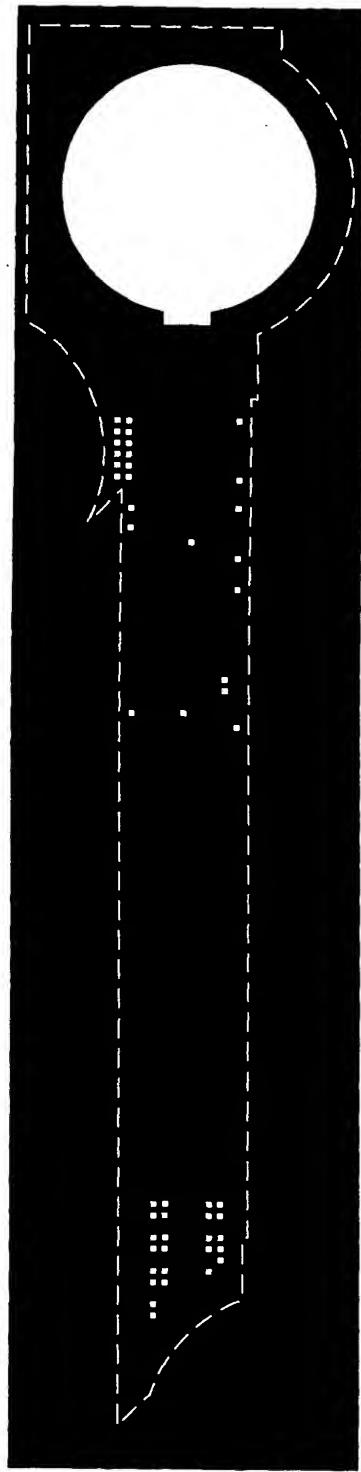
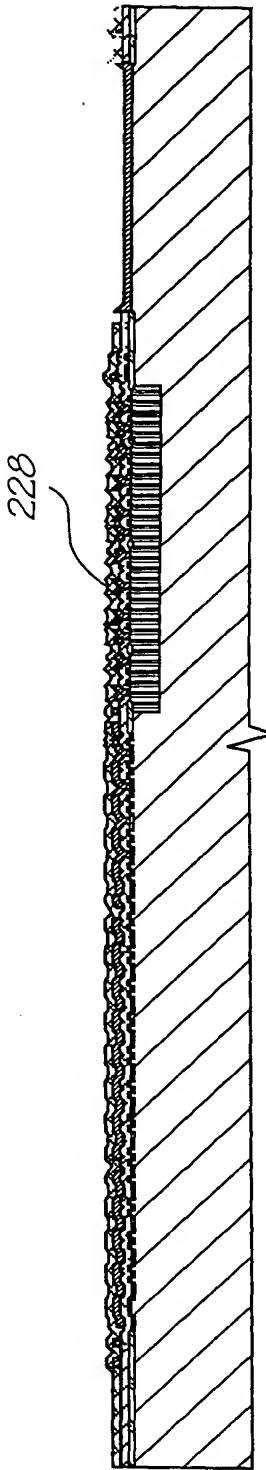


FIG. 39



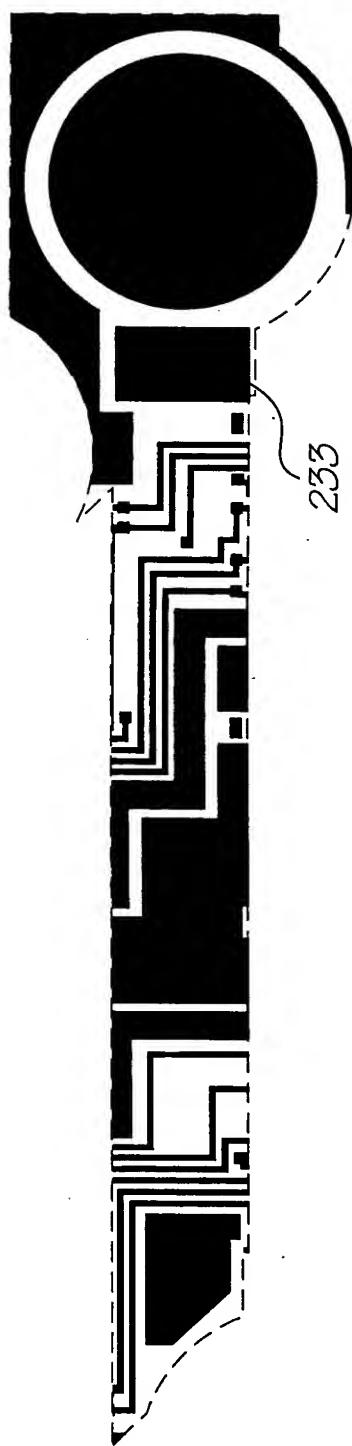
Via 1 mask

FIG. 40



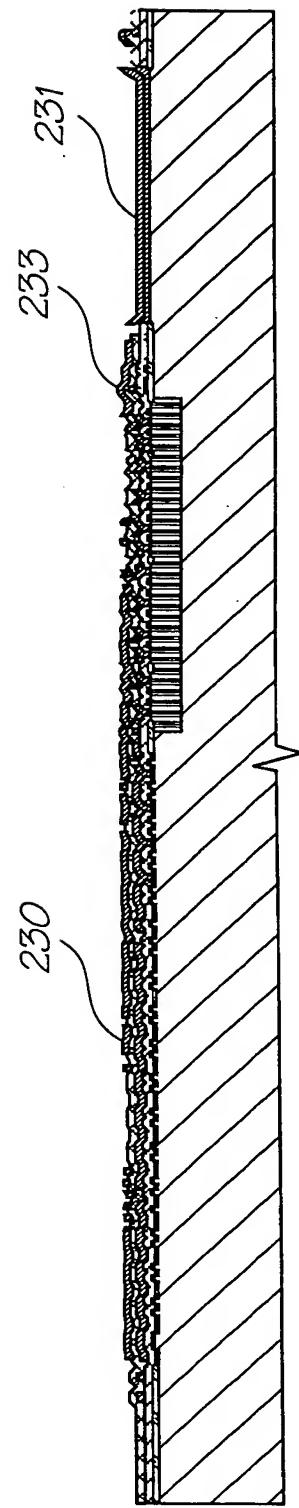
Deposit 1 ILD 2, etch vias

FIG. 41



Metal 2 mask

FIG. 42



Deposit metal 2

FIG. 43

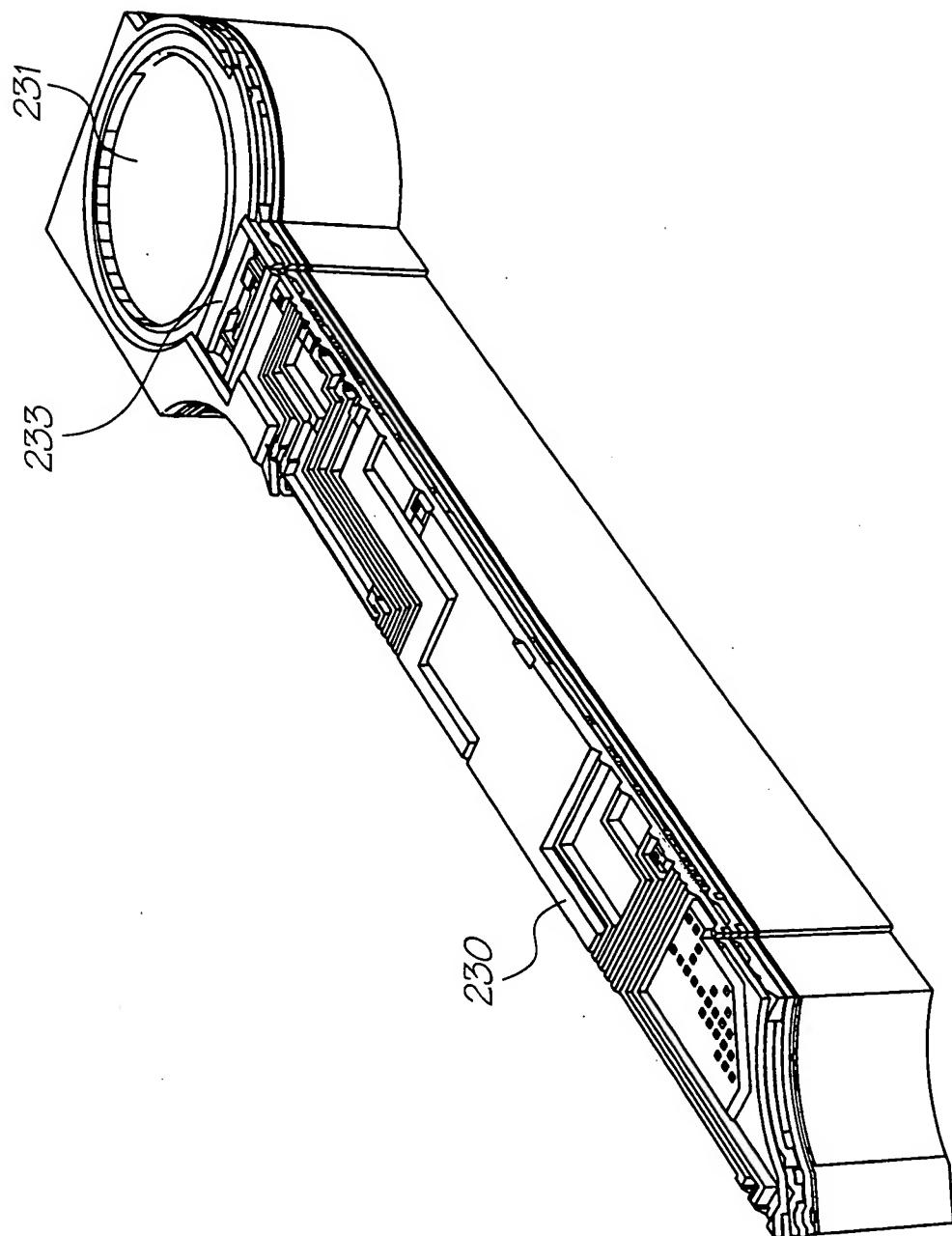
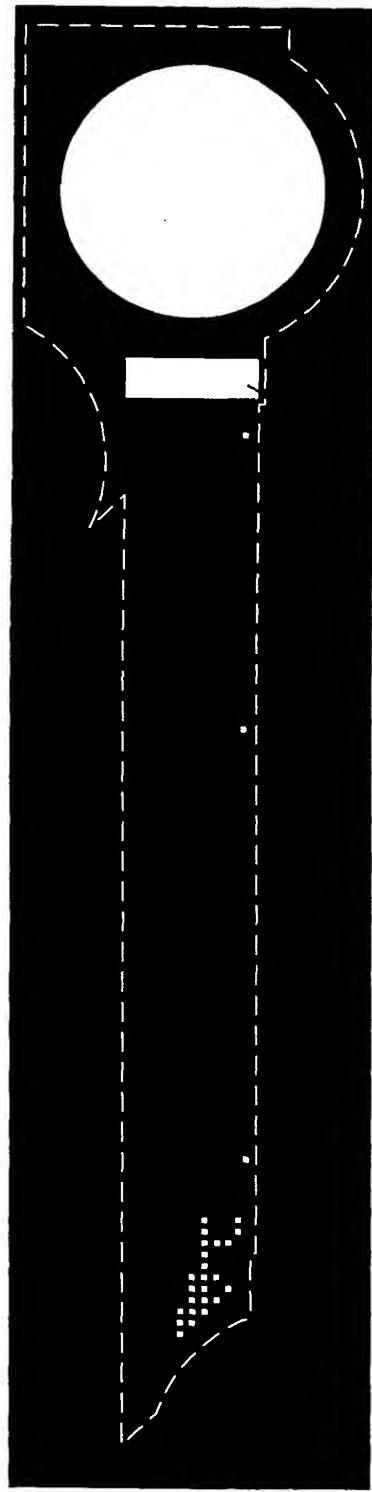
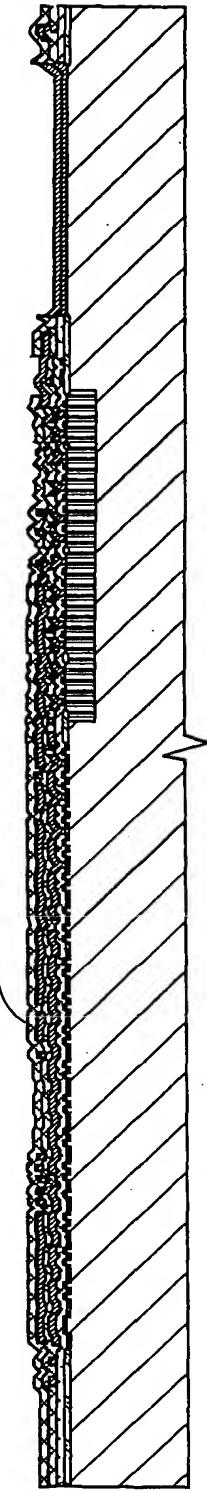


FIG. 44



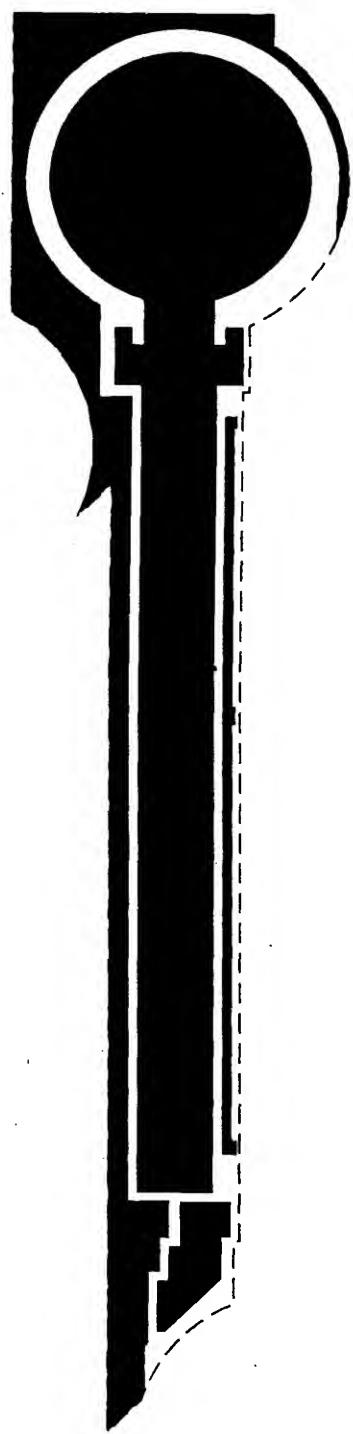
Via 2 mask

FIG. 45



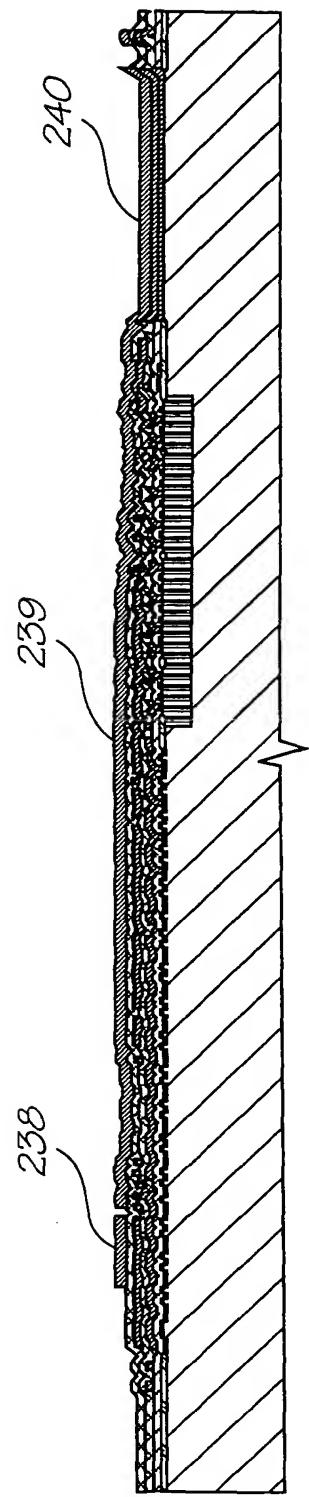
Deposit ILD 3, etch vias

FIG. 46



Metal 3 mask

FIG. 47



Deposit metal 3

FIG. 48

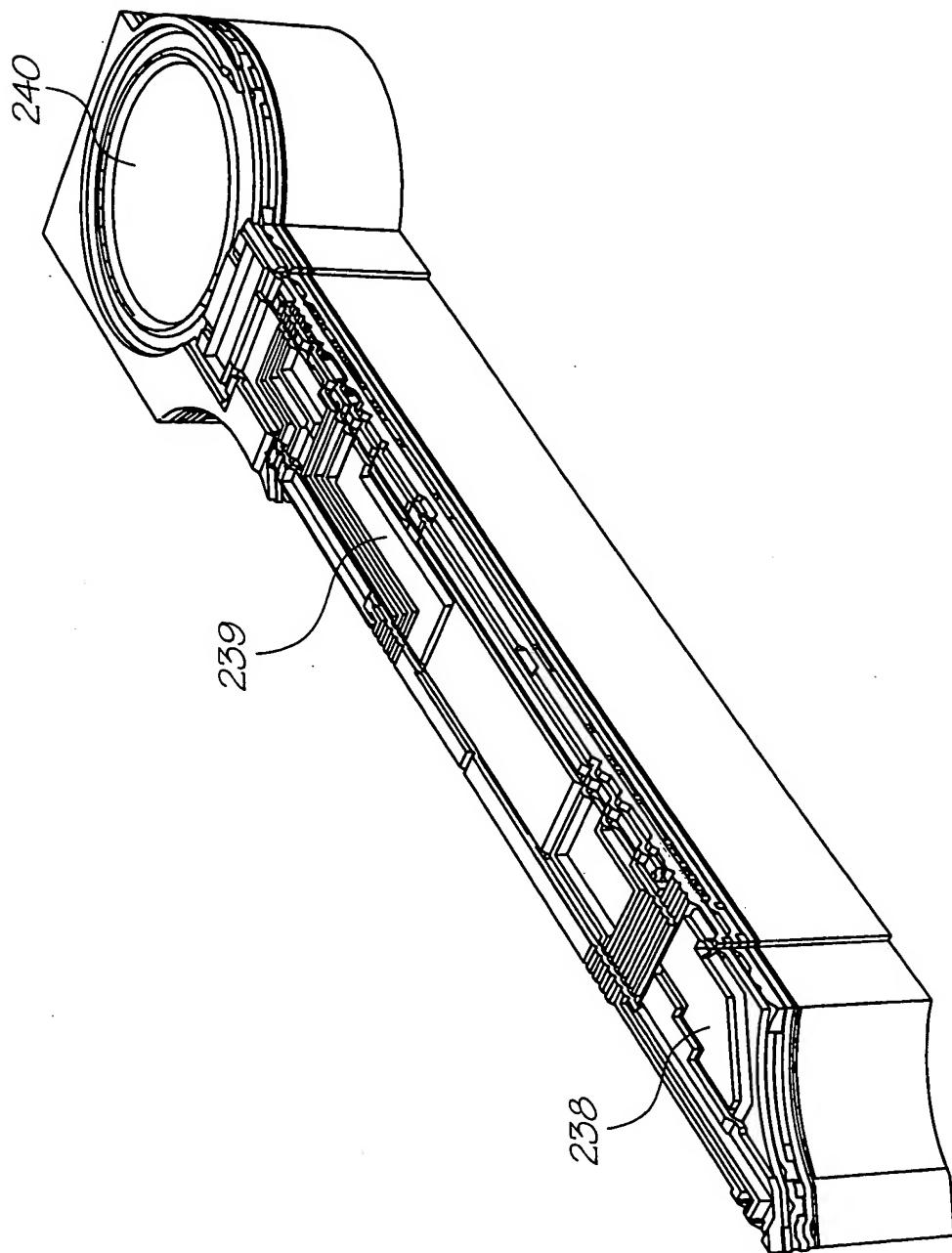
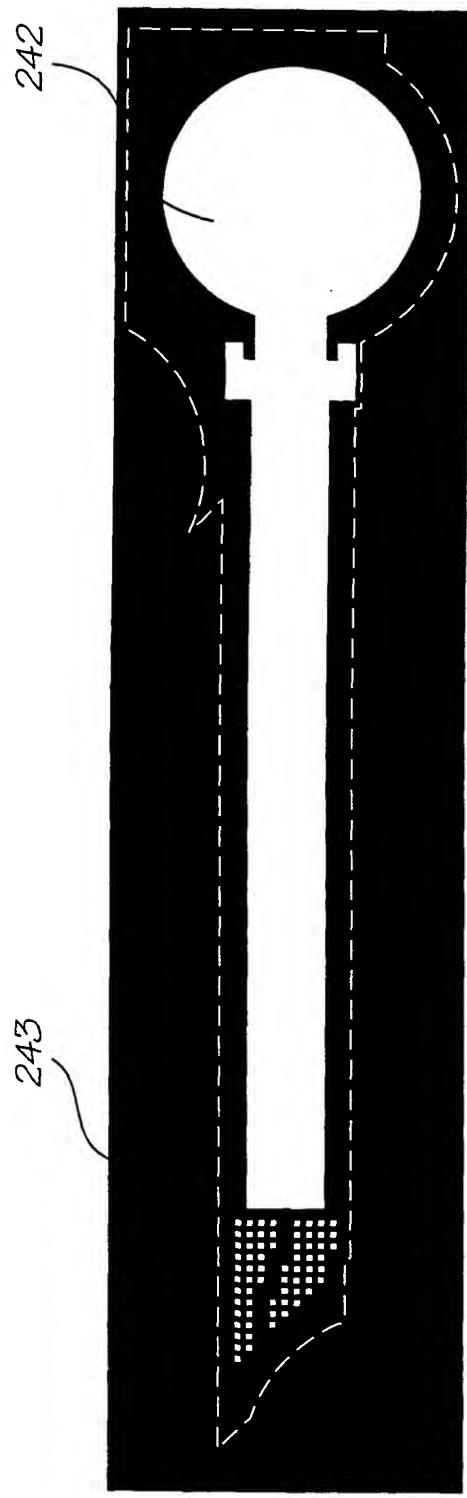
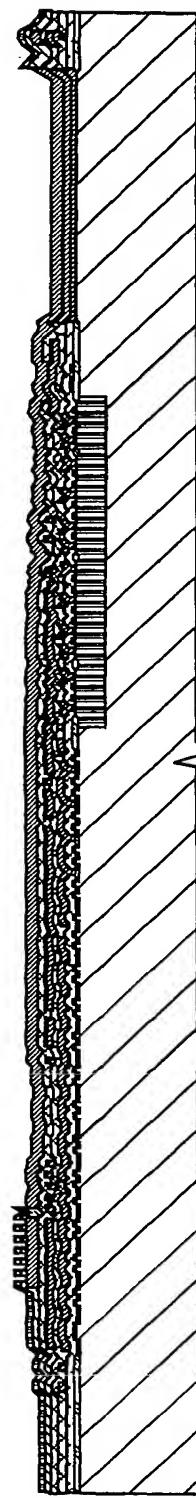


FIG. 49



Via 3 / Passivation mask

FIG. 50



Deposit passivation oxide & nitride, etch vias

FIG. 51

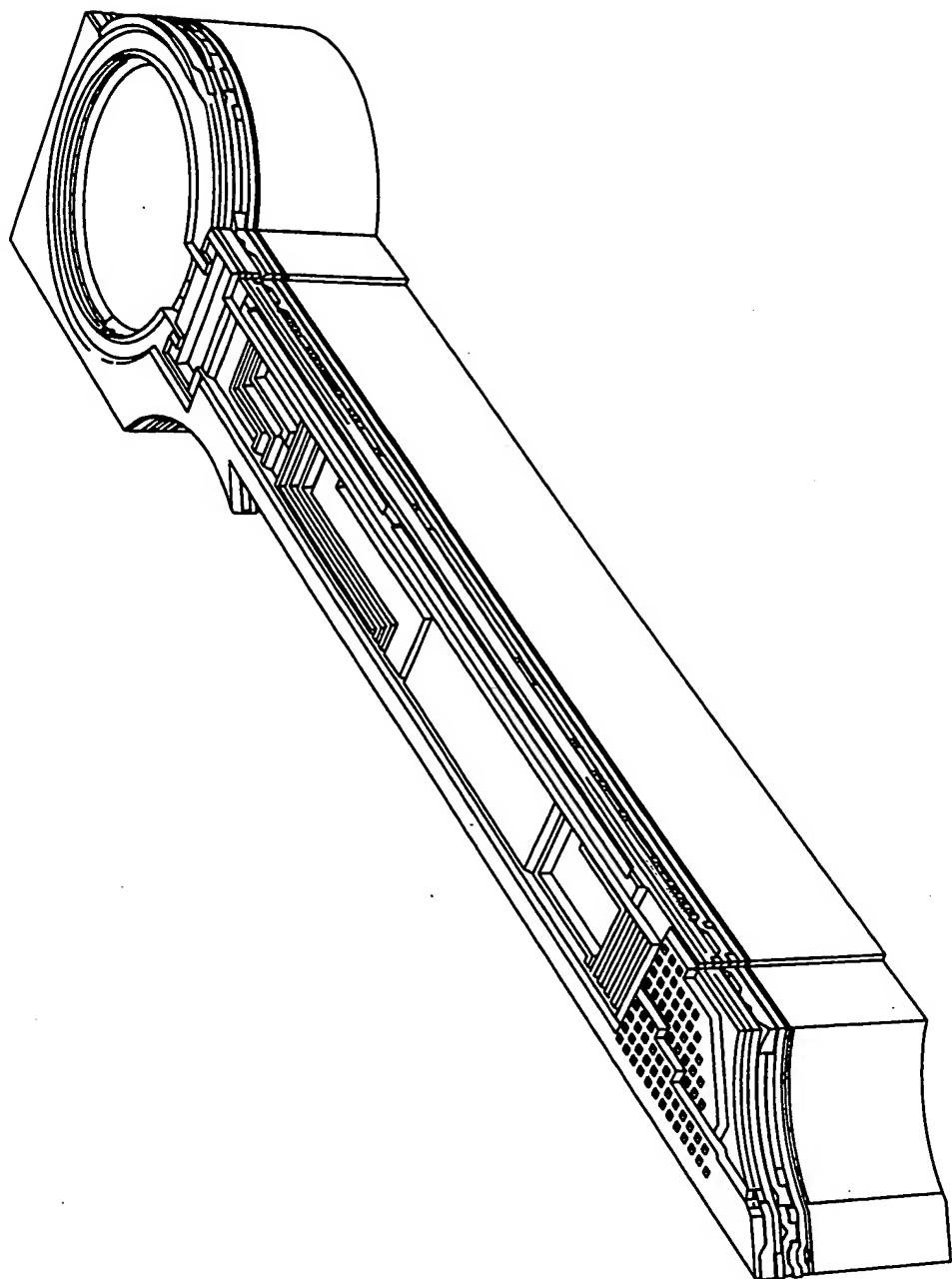
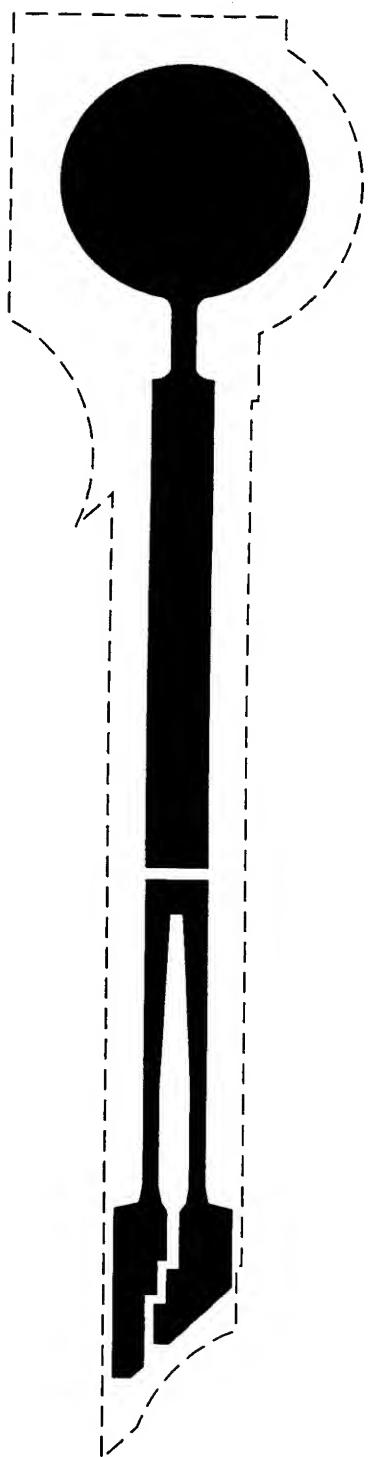
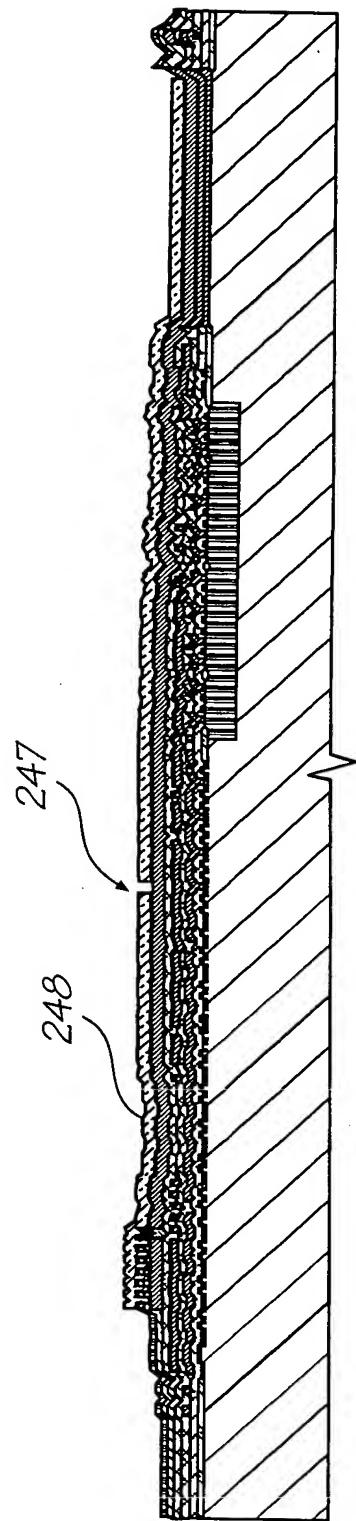


FIG. 52



Heater mask

FIG. 53



Deposit heater TiN

FIG. 54

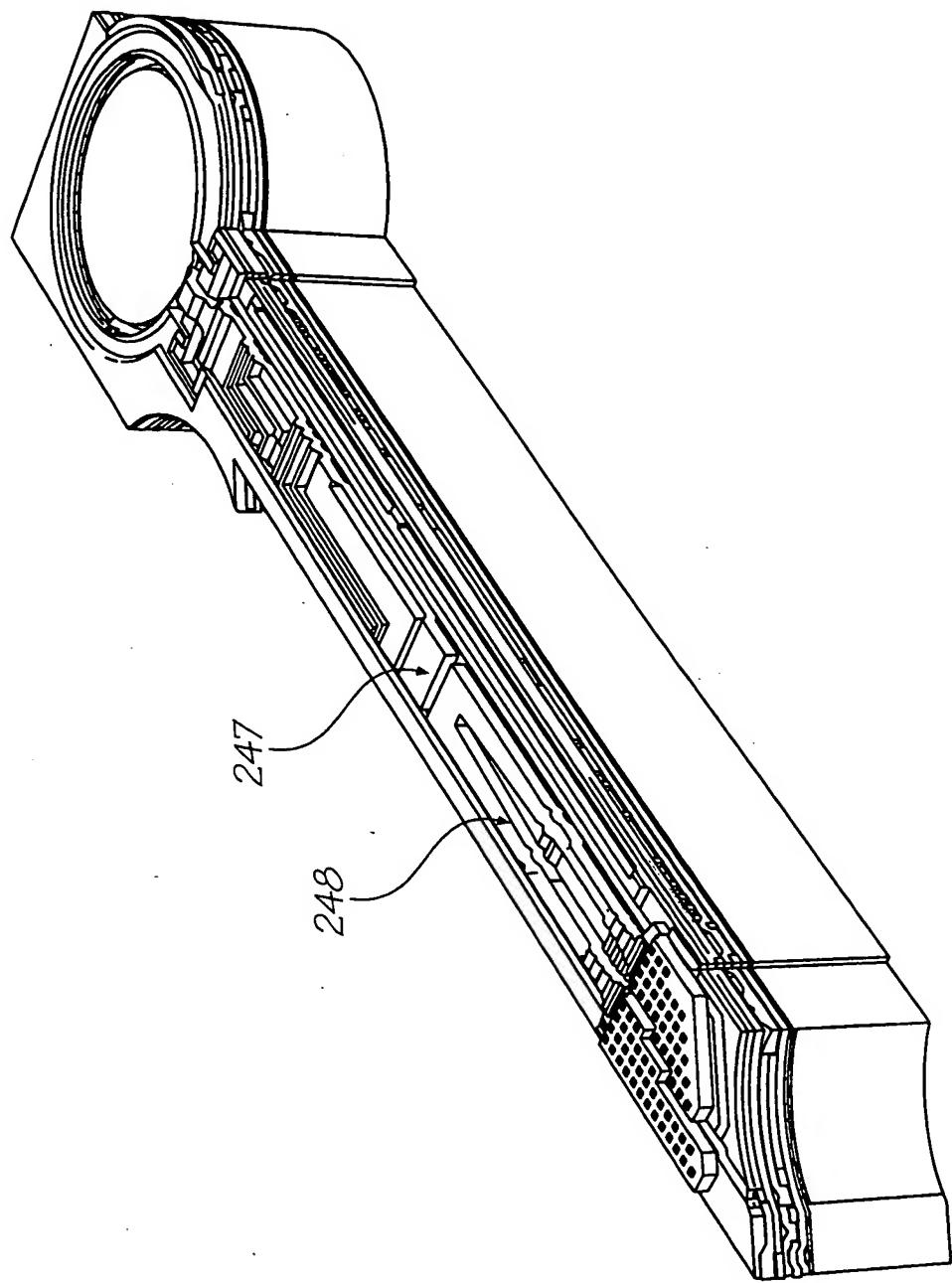


FIG. 55

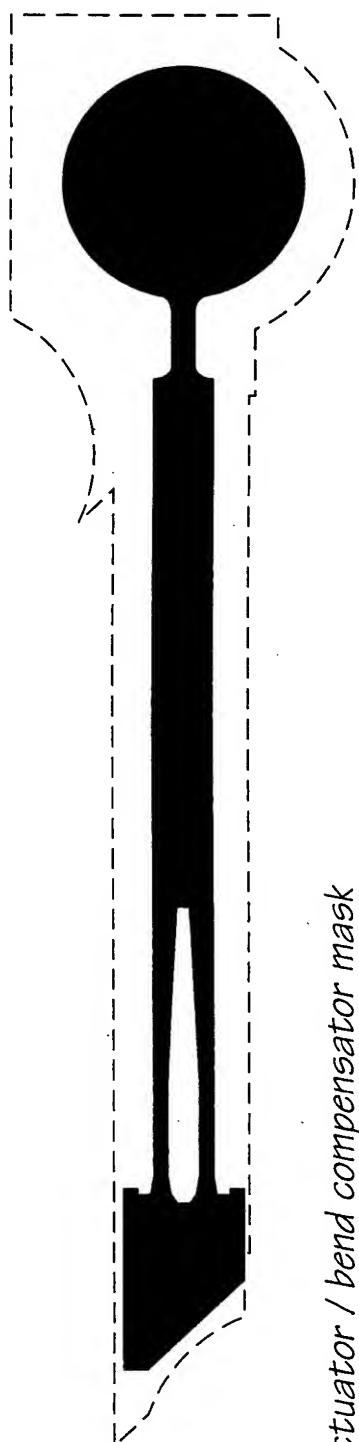


FIG. 56

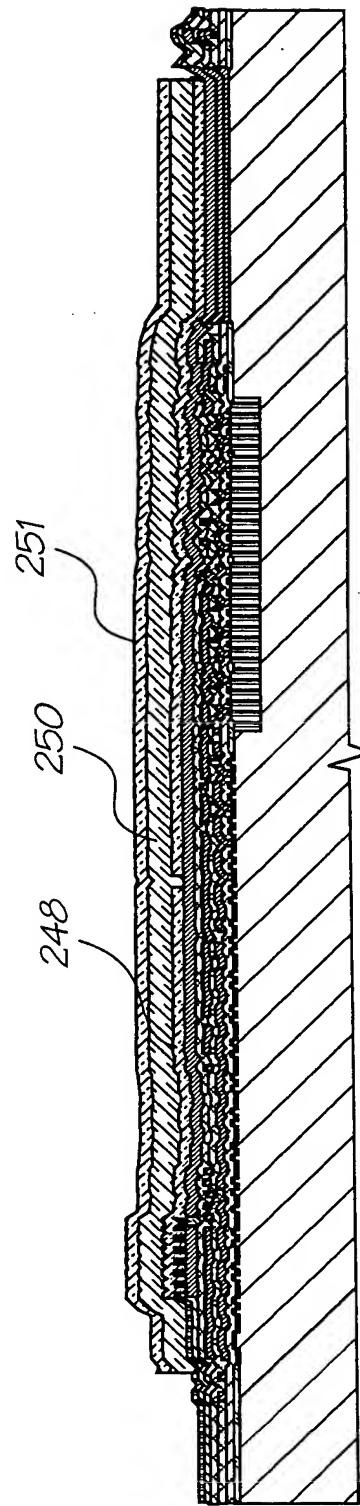


FIG. 57

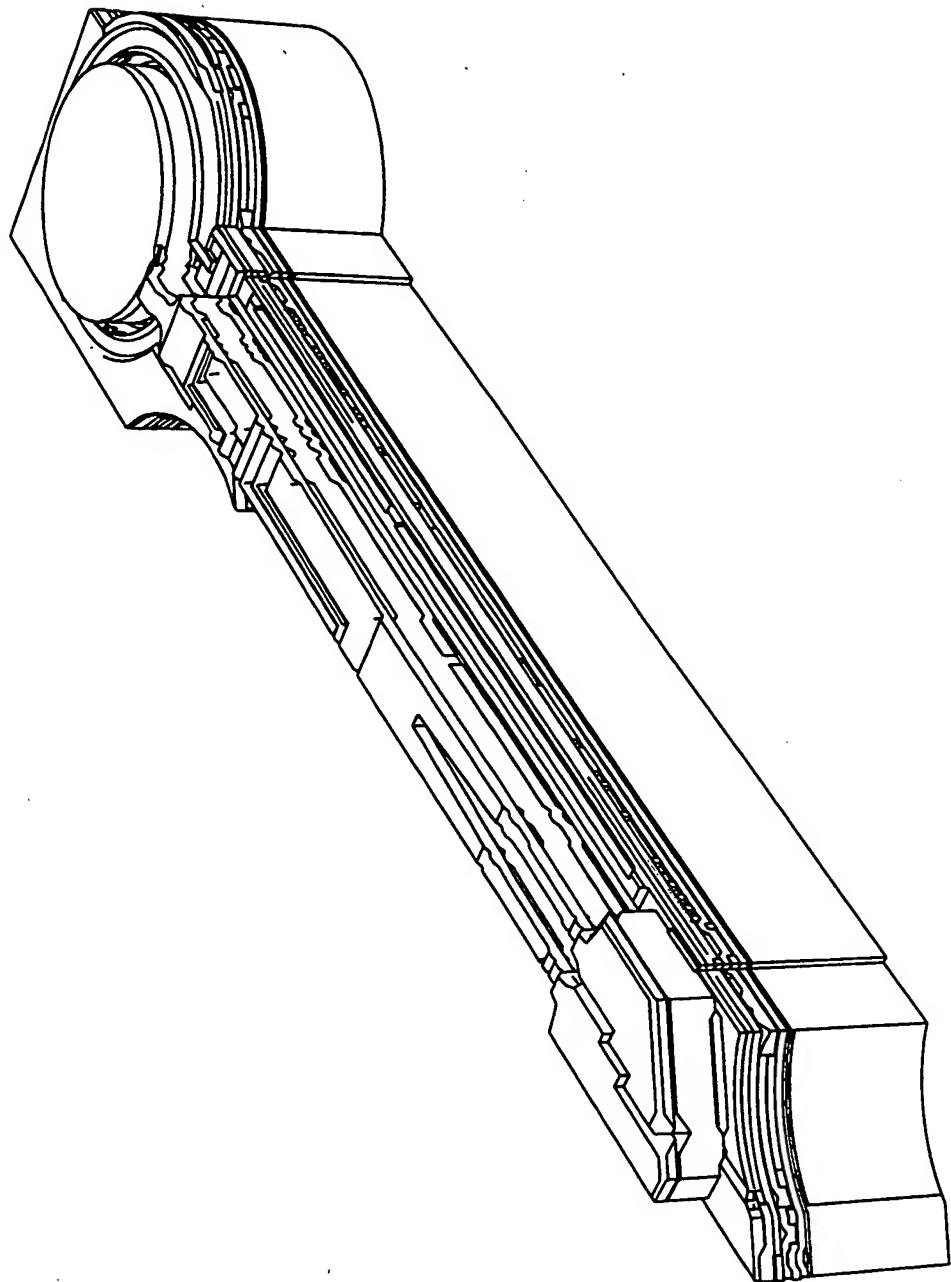


FIG. 58

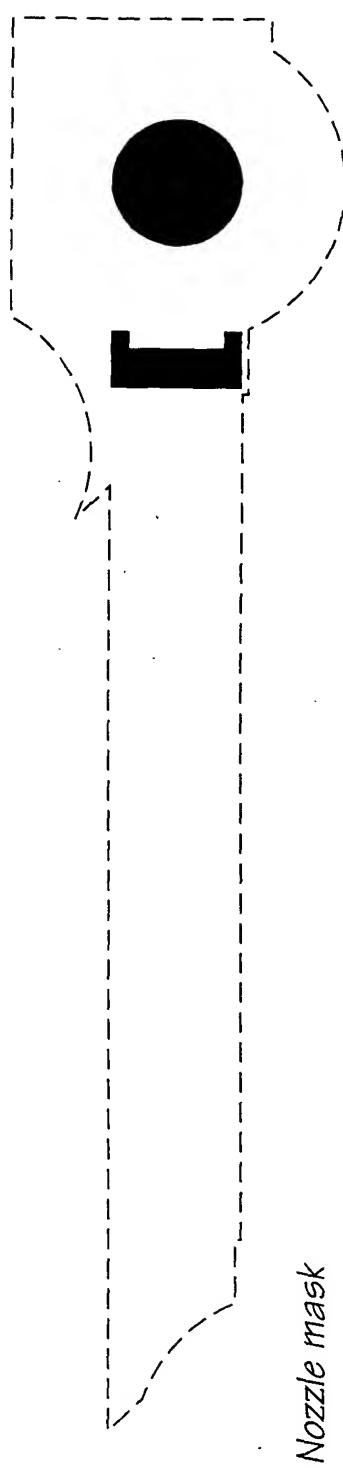
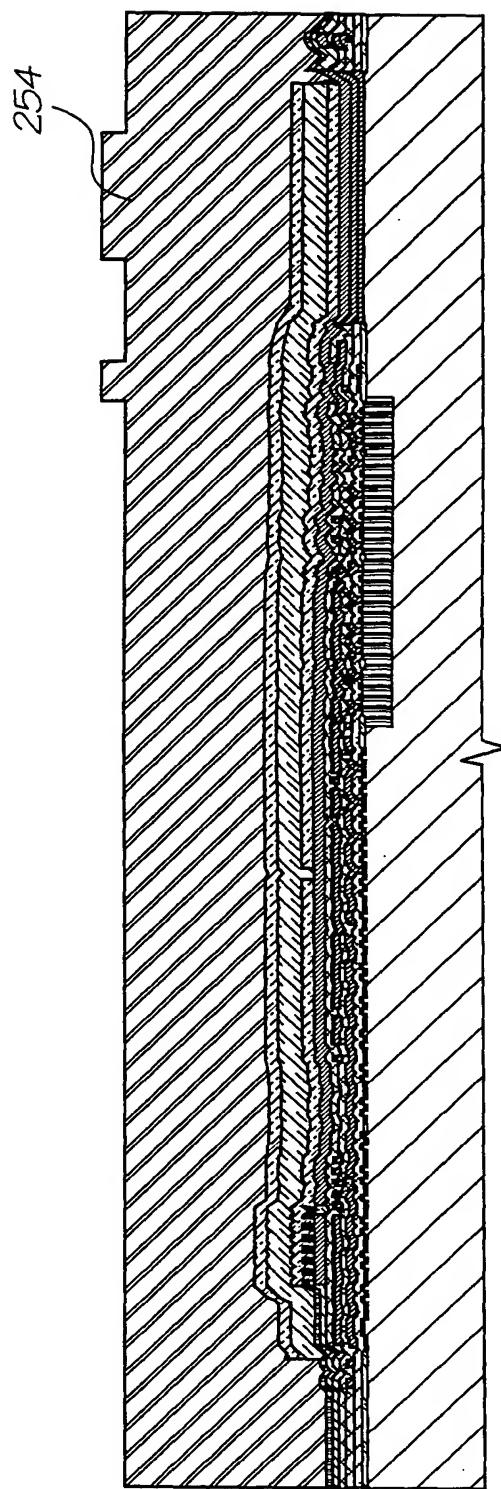


FIG. 59



Deposit sacrificial layer, etch nozzles

FIG. 60

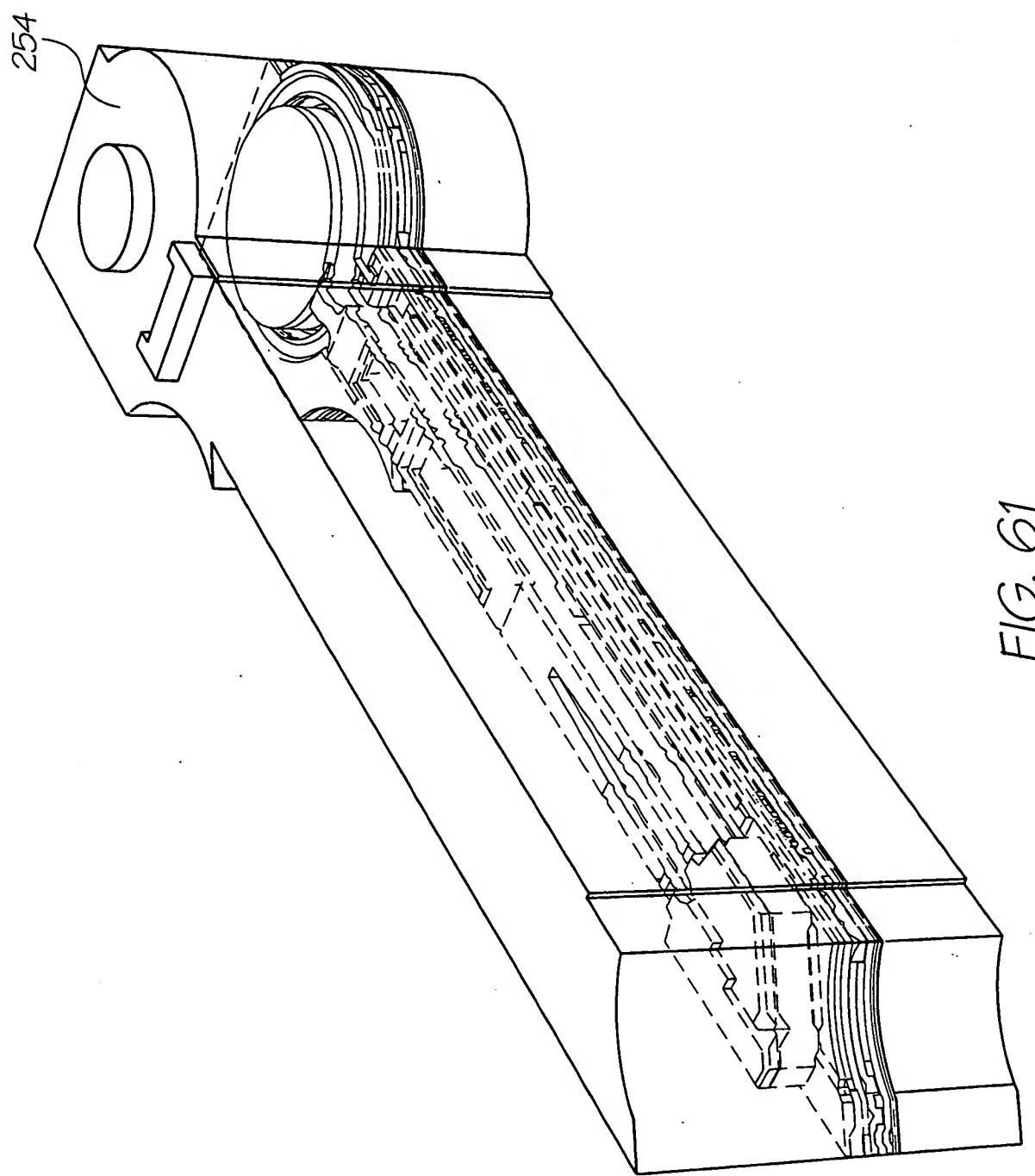
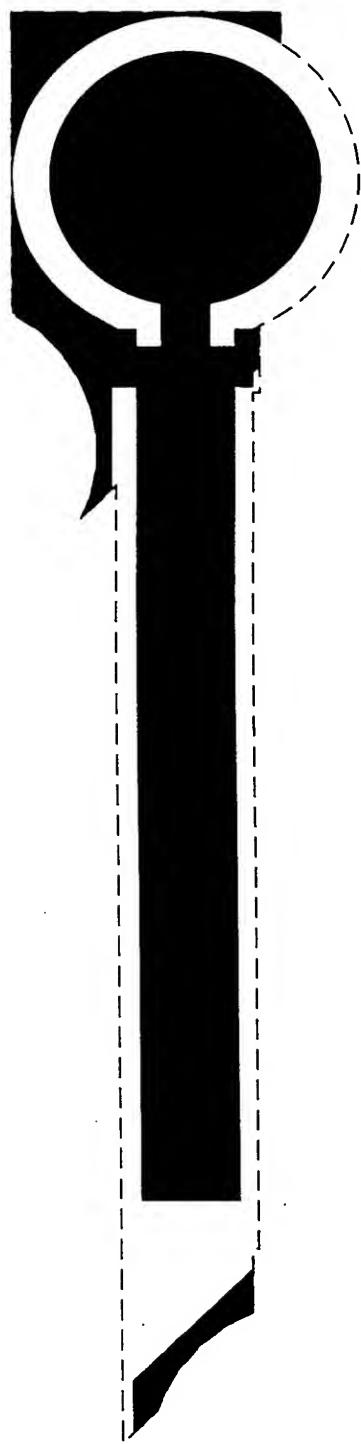
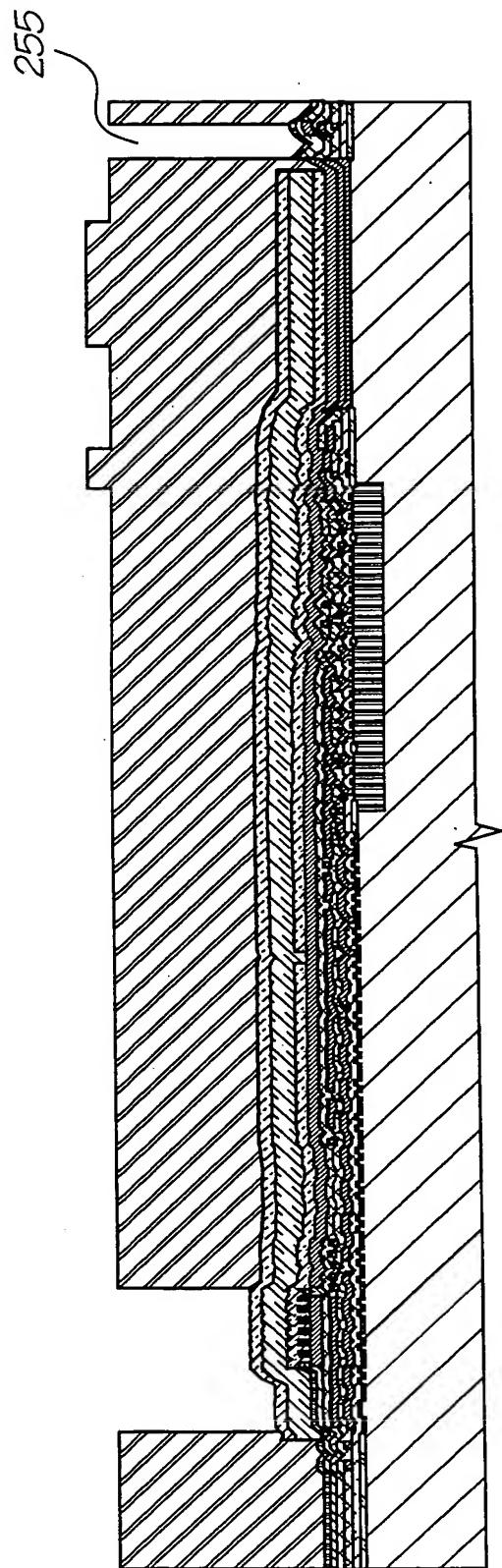


FIG. 61



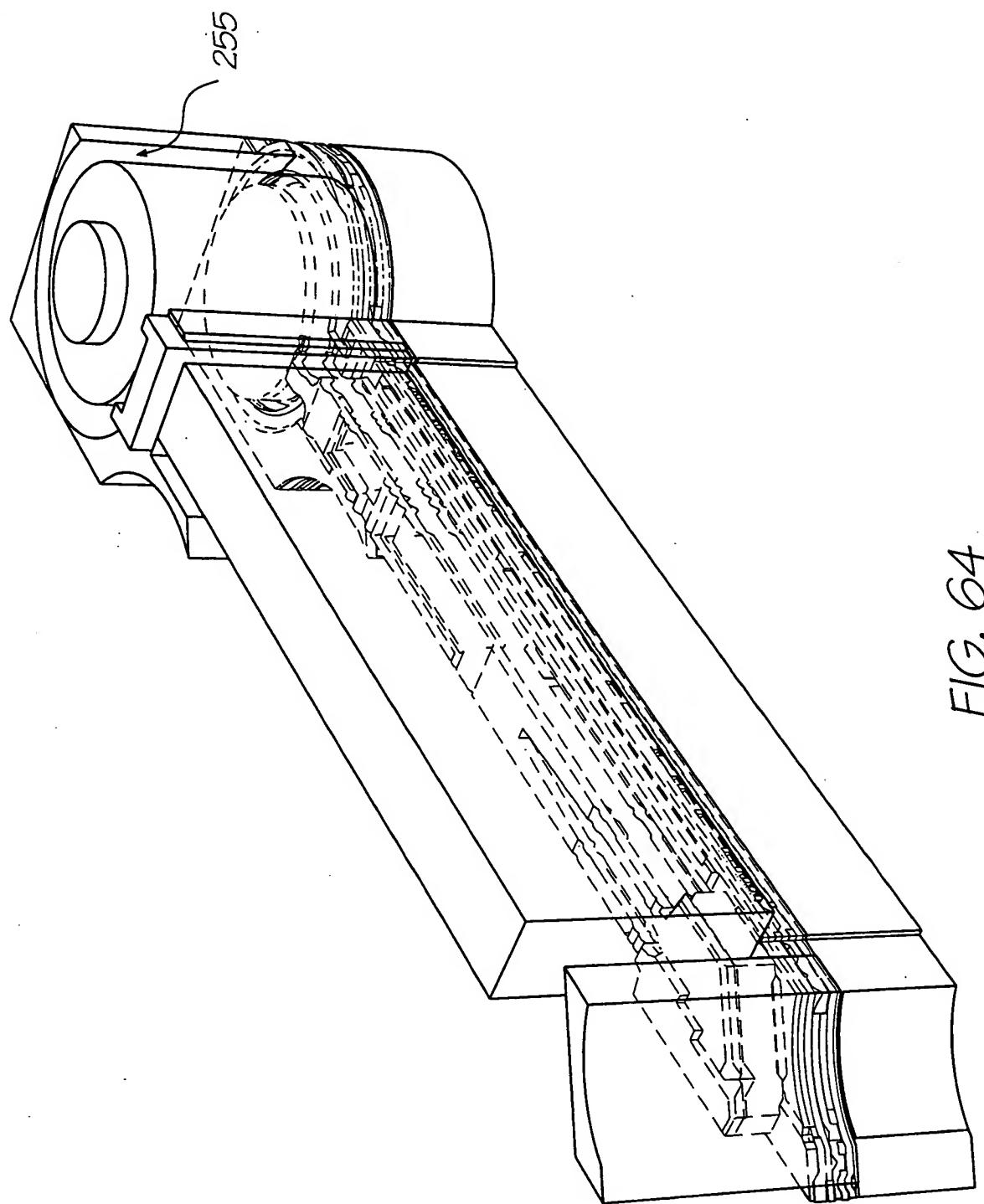
Chamber mask

FIG. 62



Etch chambers in sacrificial layer

FIG. 63



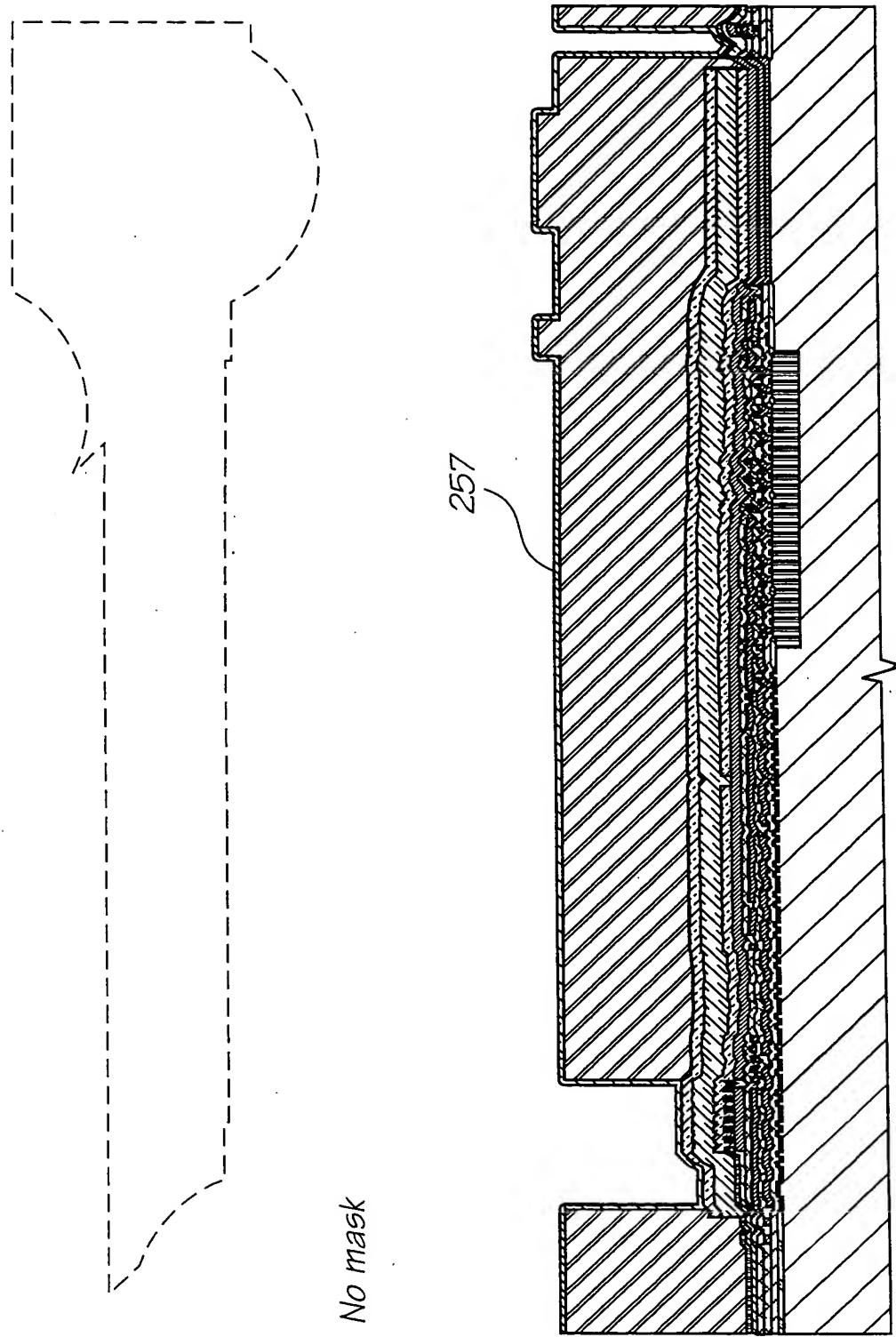
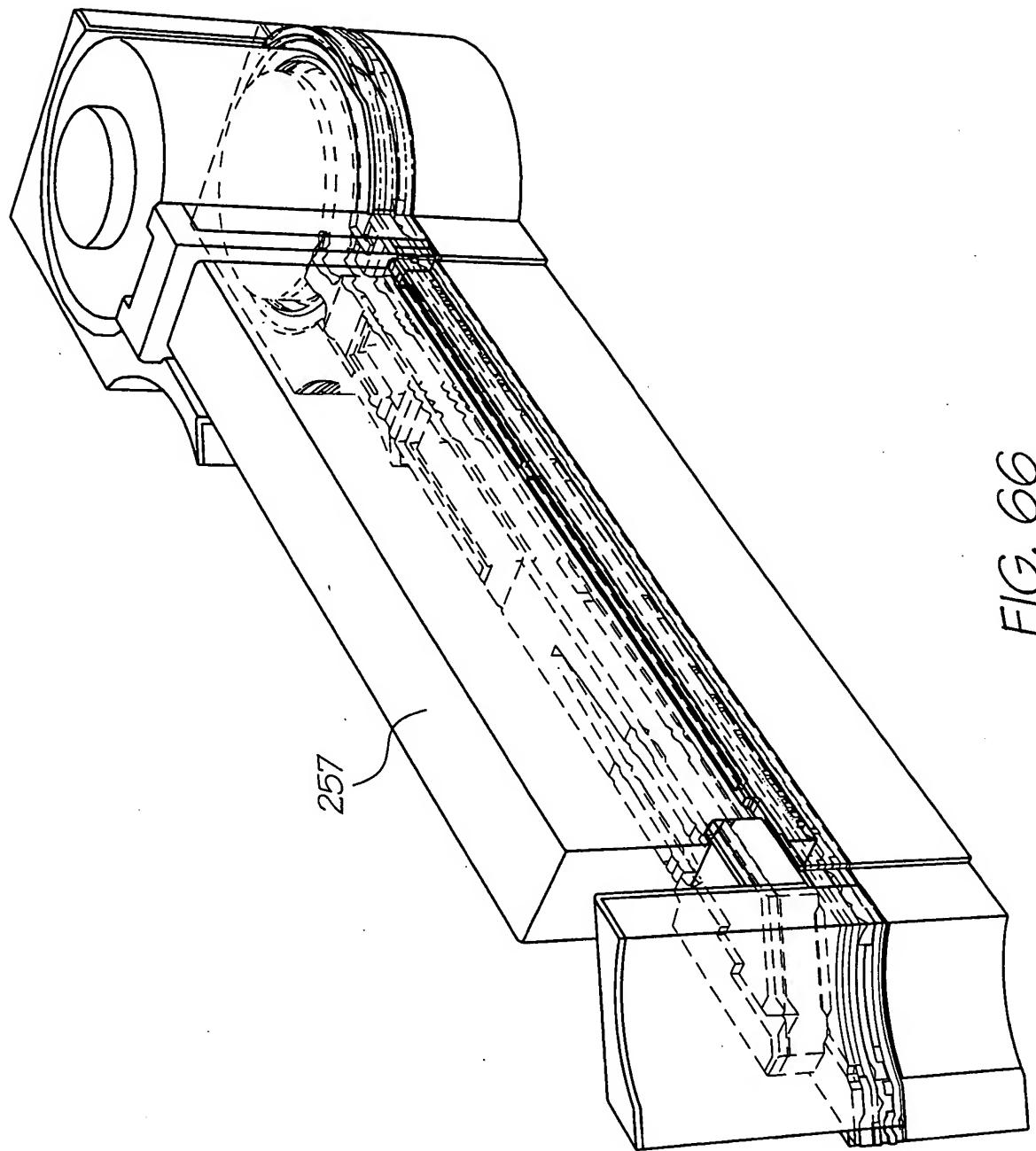


FIG. 65  
*Deposit chamber walls*



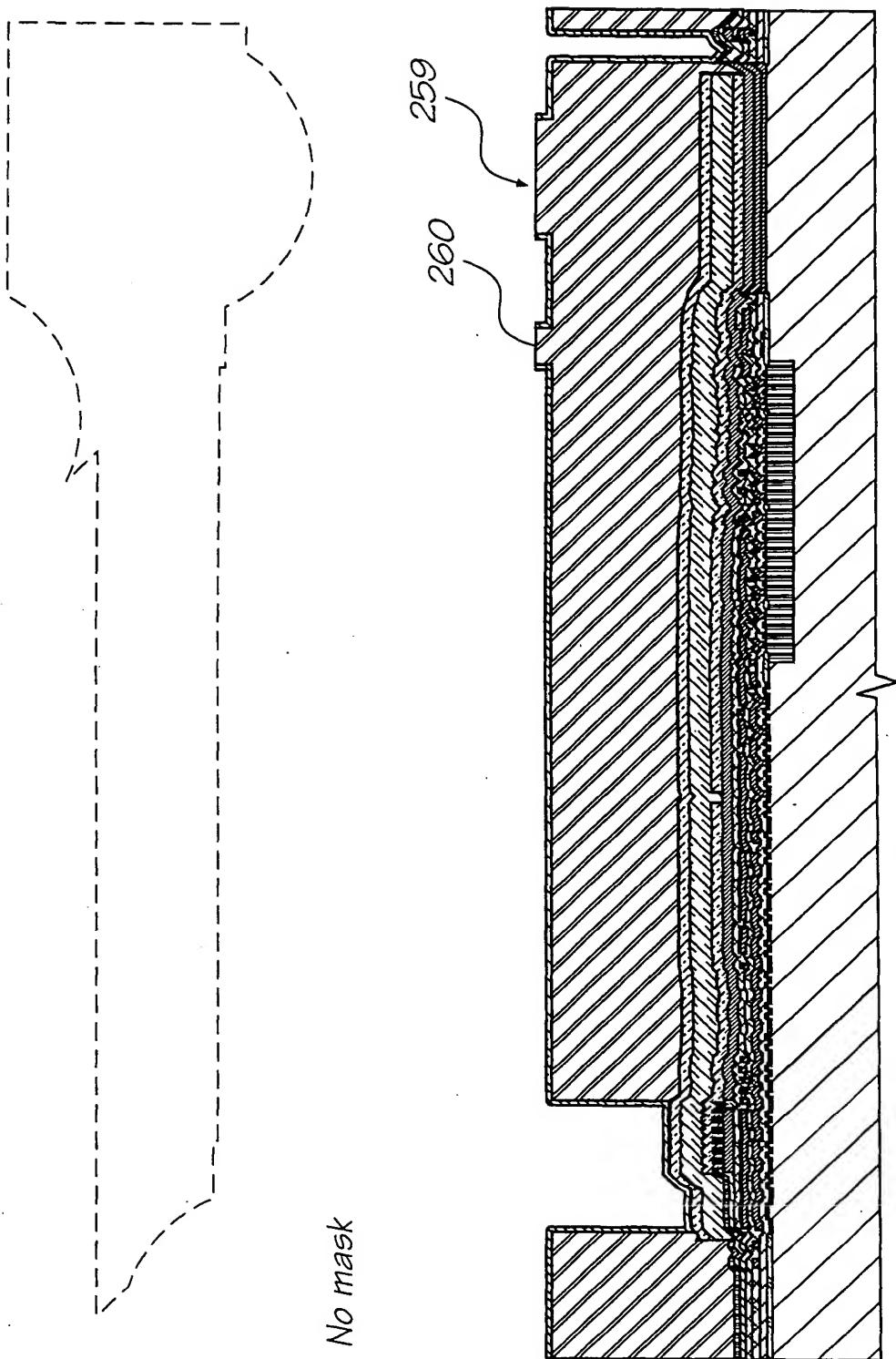
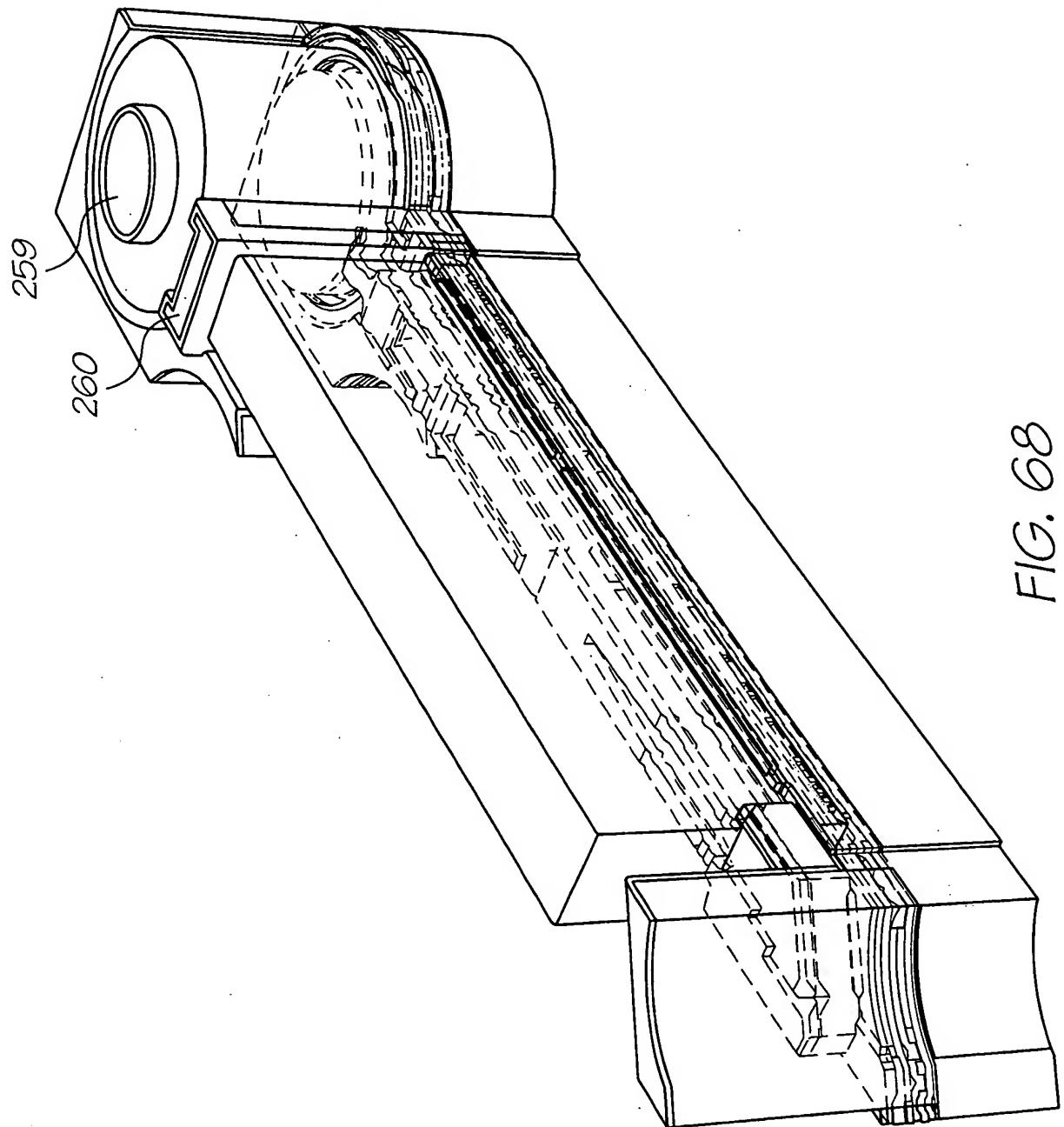


FIG. 67

Form self-aligned nozzles using CMP



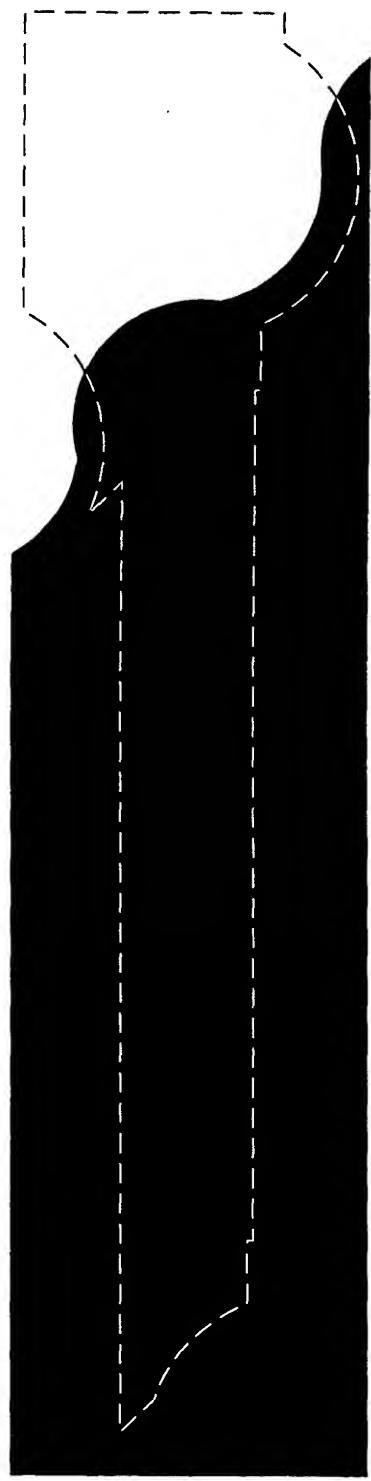


FIG. 70  
Back-etch inlet mask

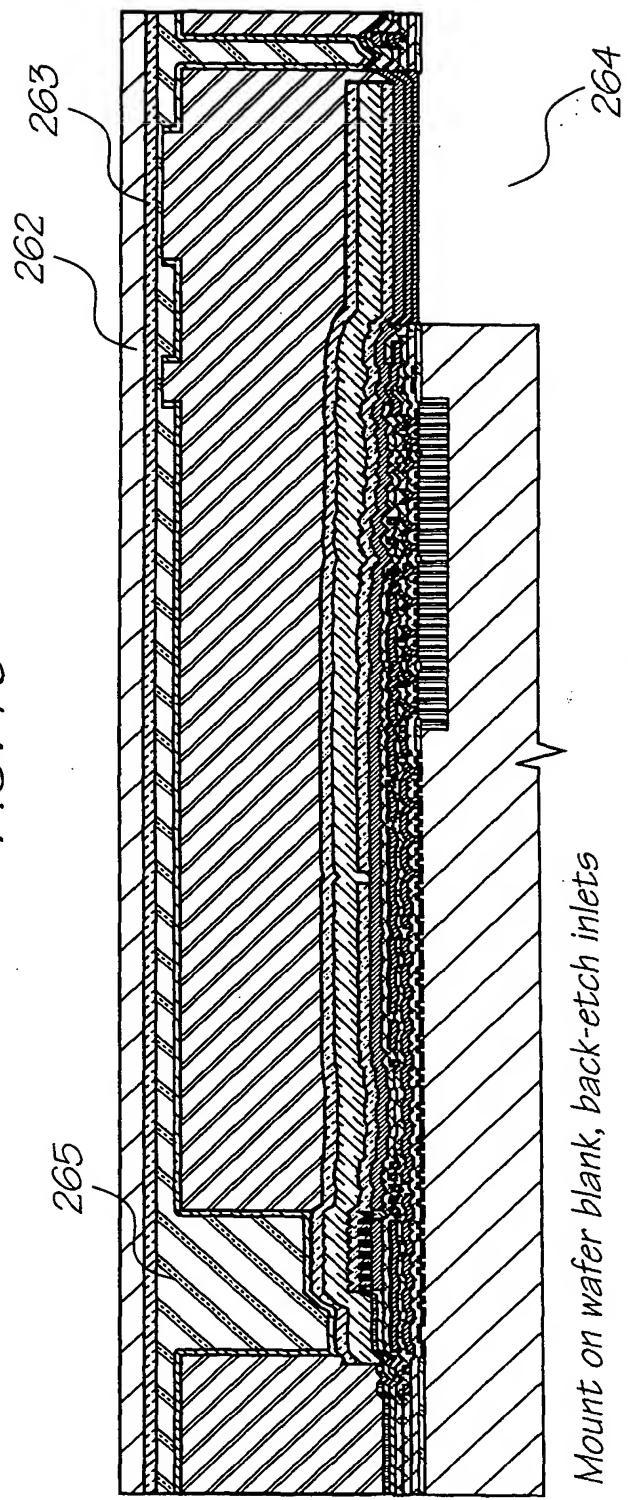


FIG. 69  
Mount on wafer blank, back-etch inlets

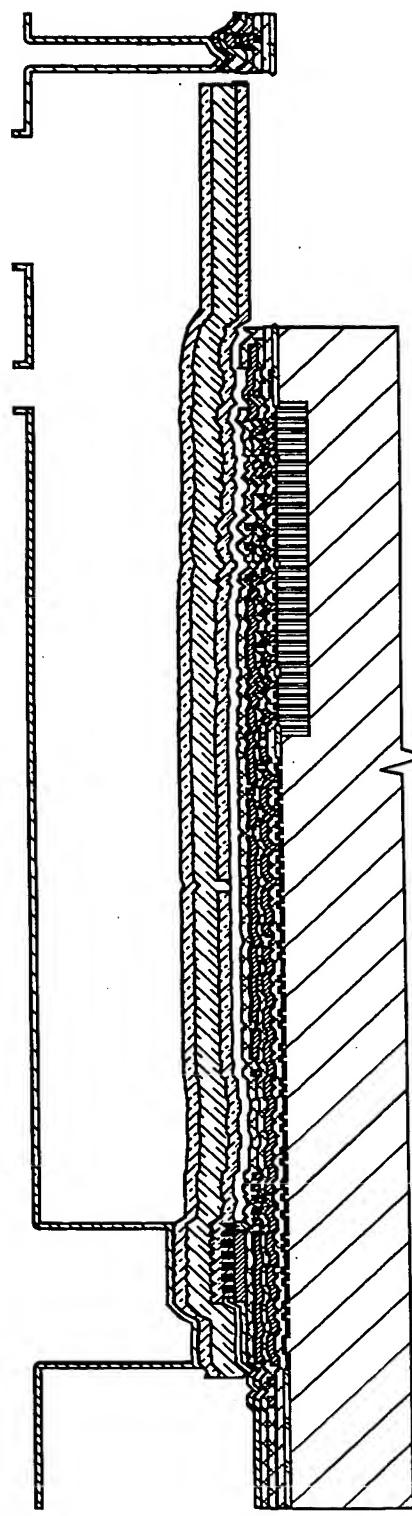
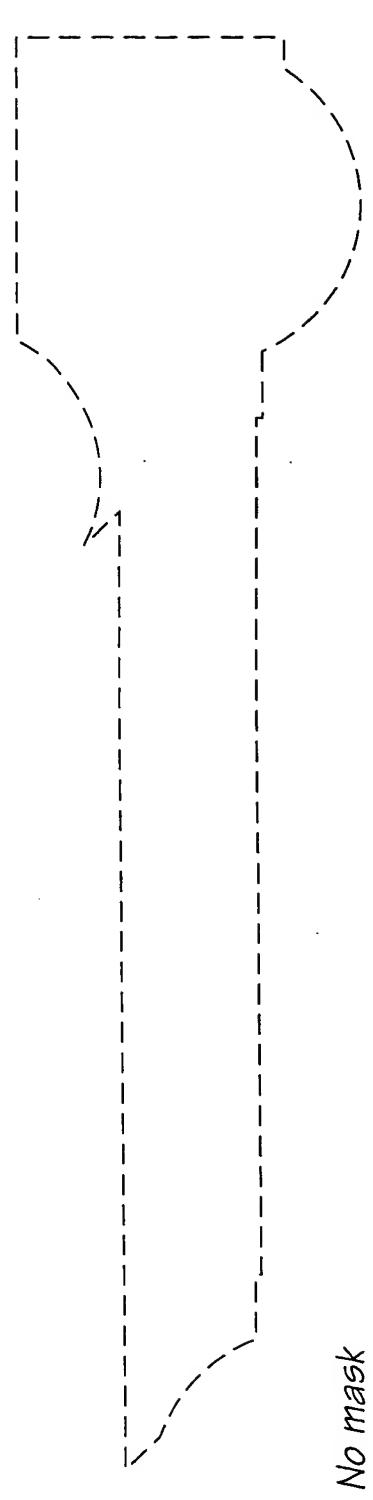


FIG. 71

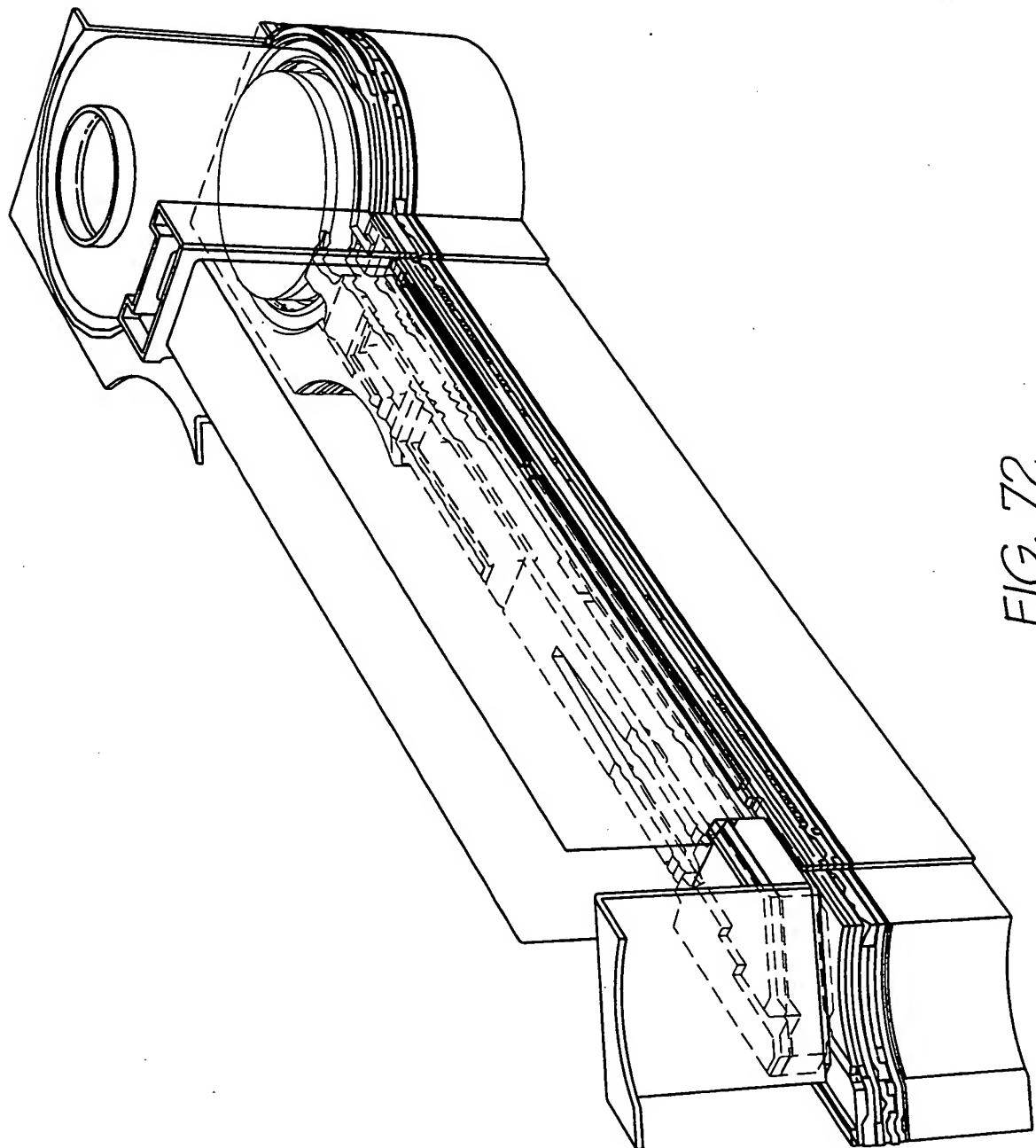


FIG. 72

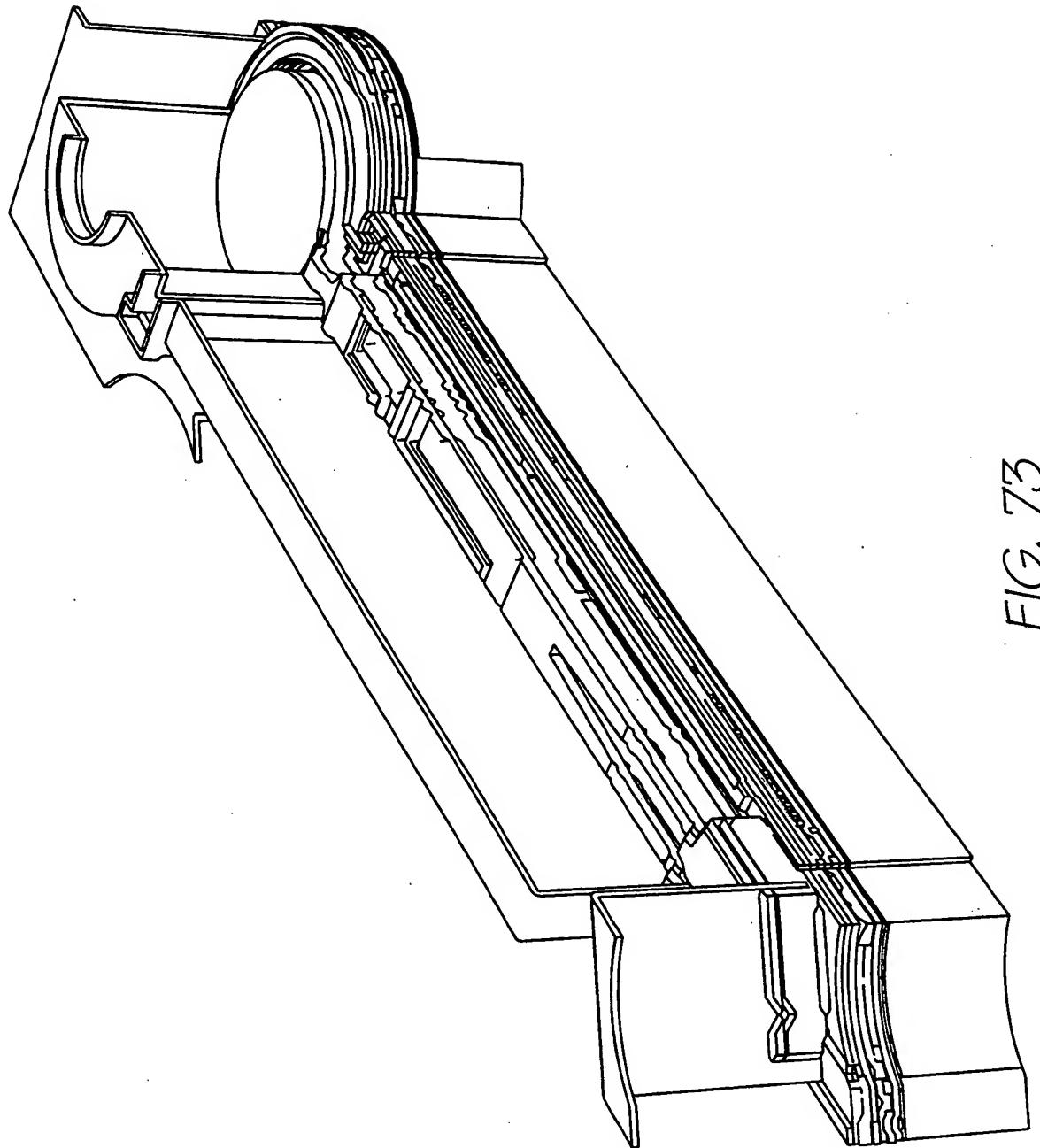
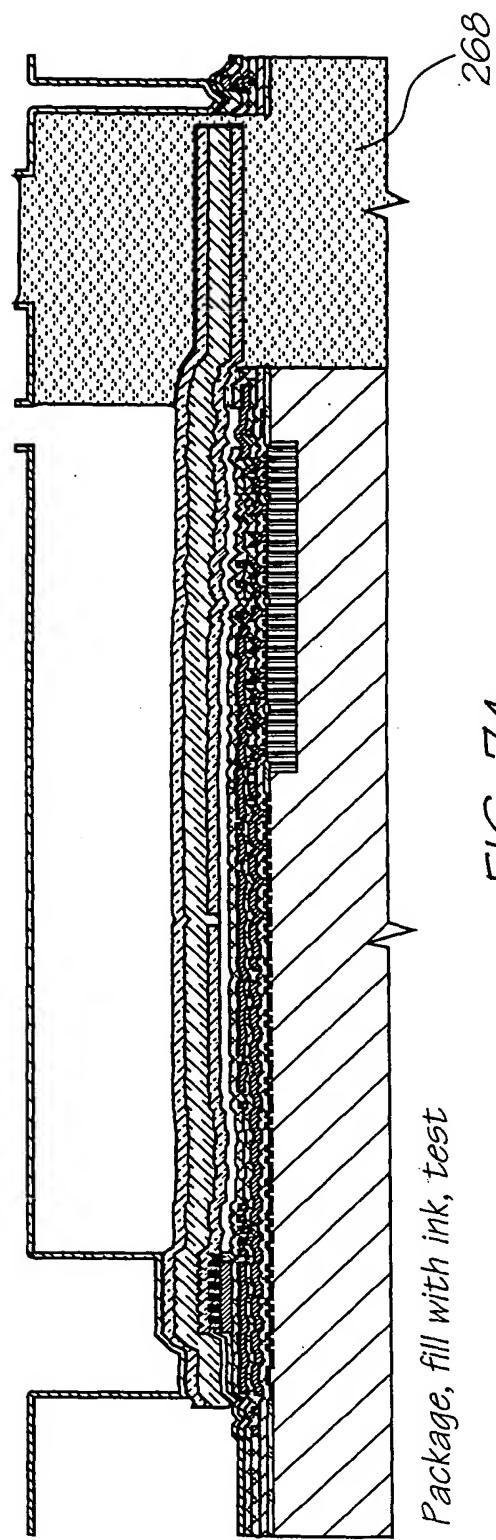
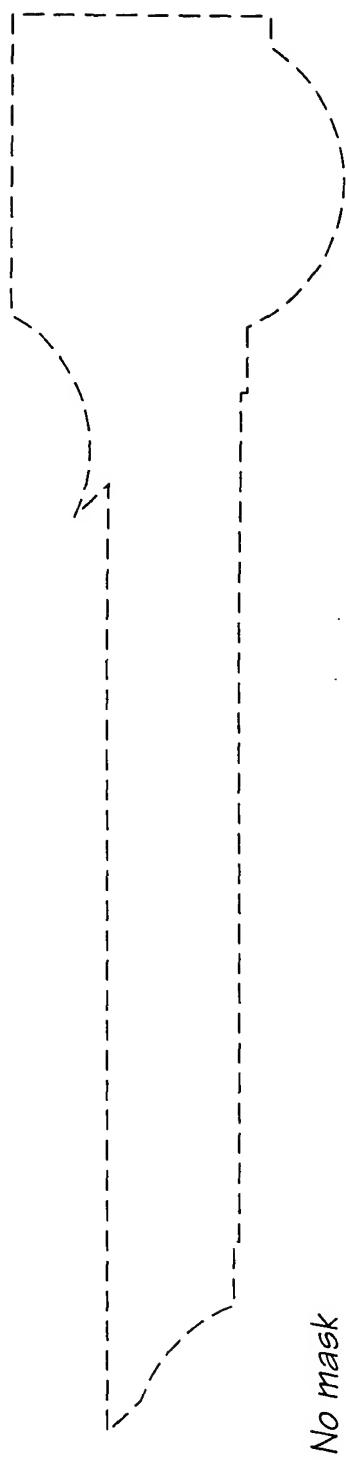
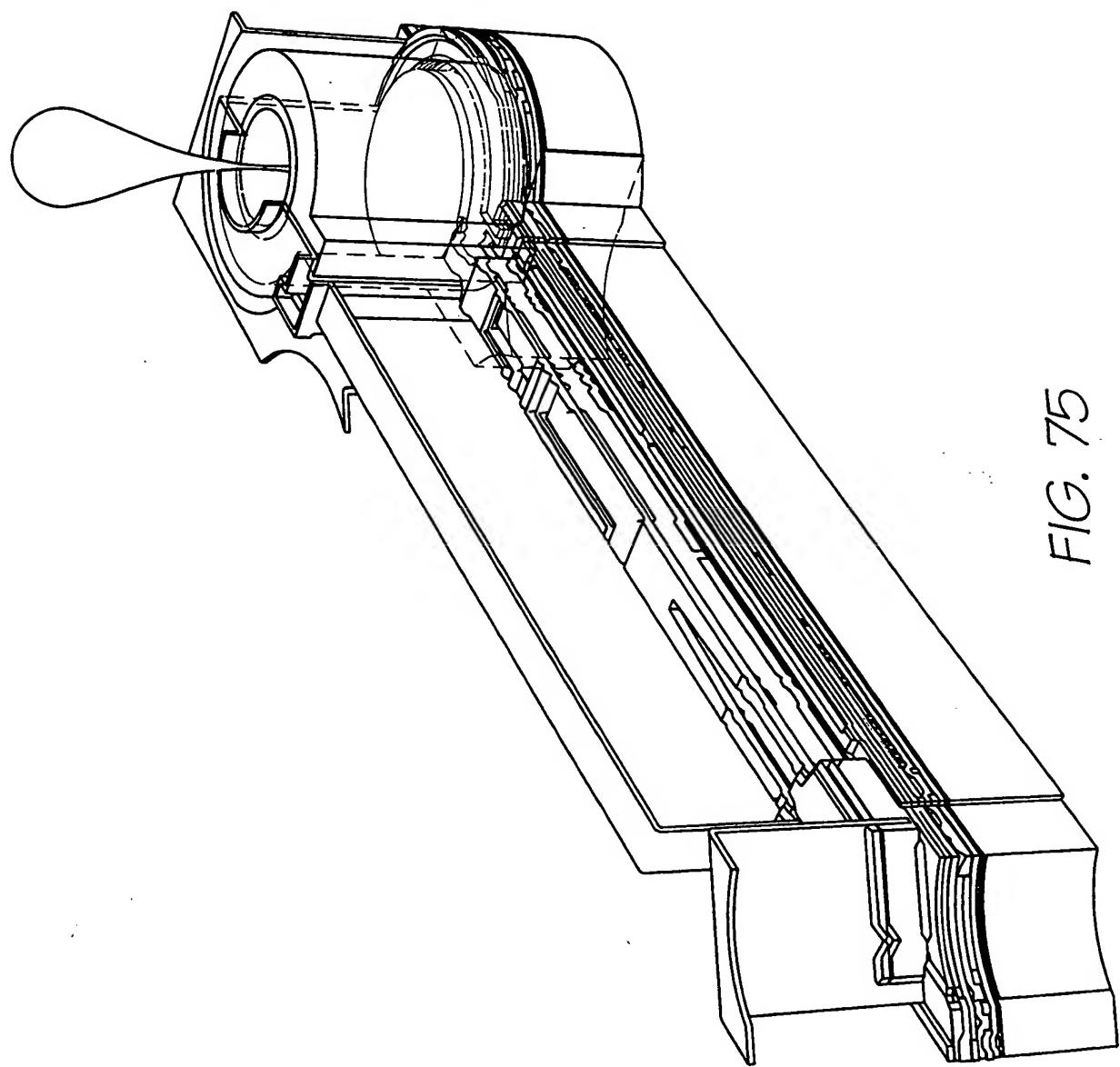


FIG. 73



Package, fill with ink, test

FIG. 74



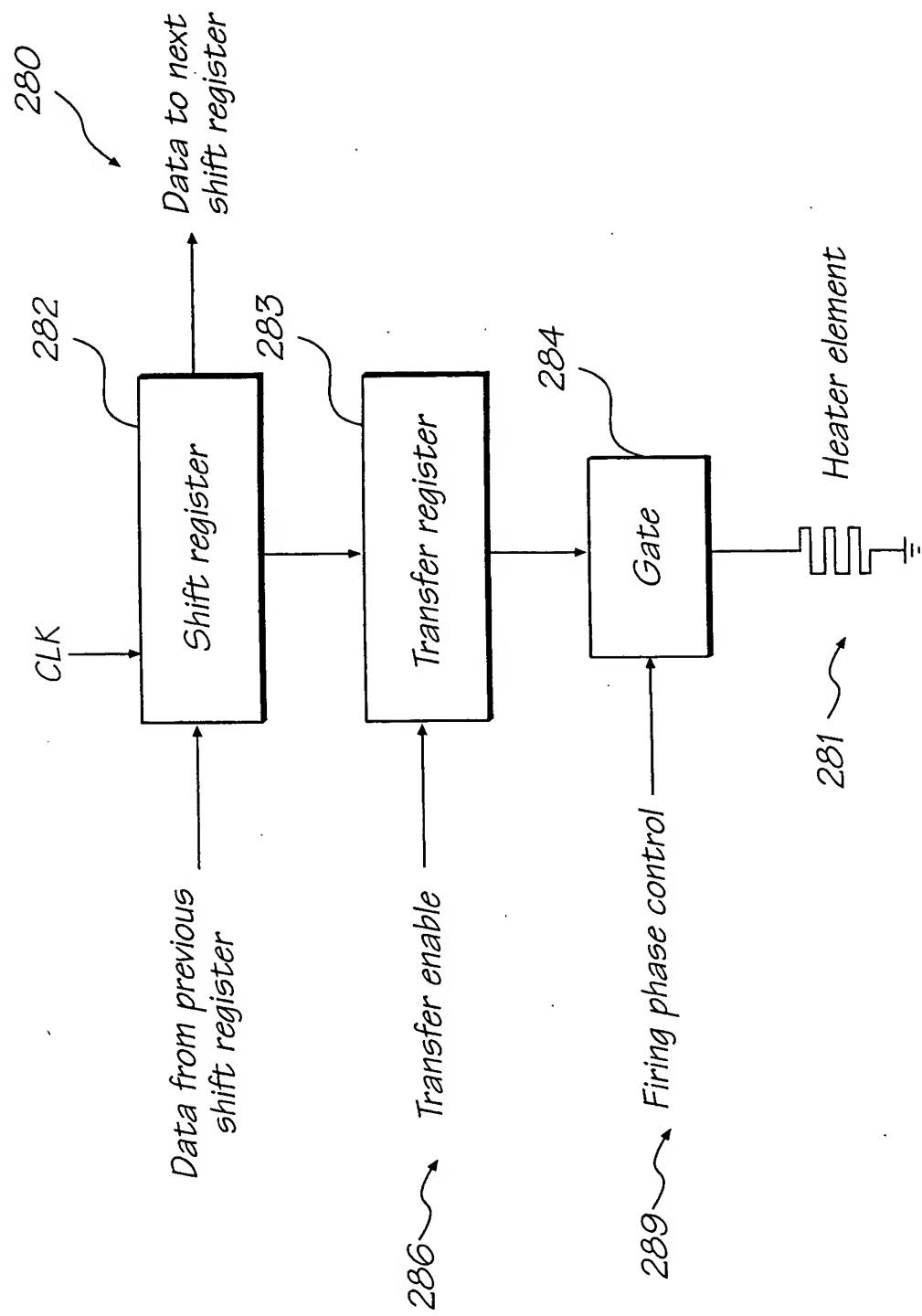


FIG. 76

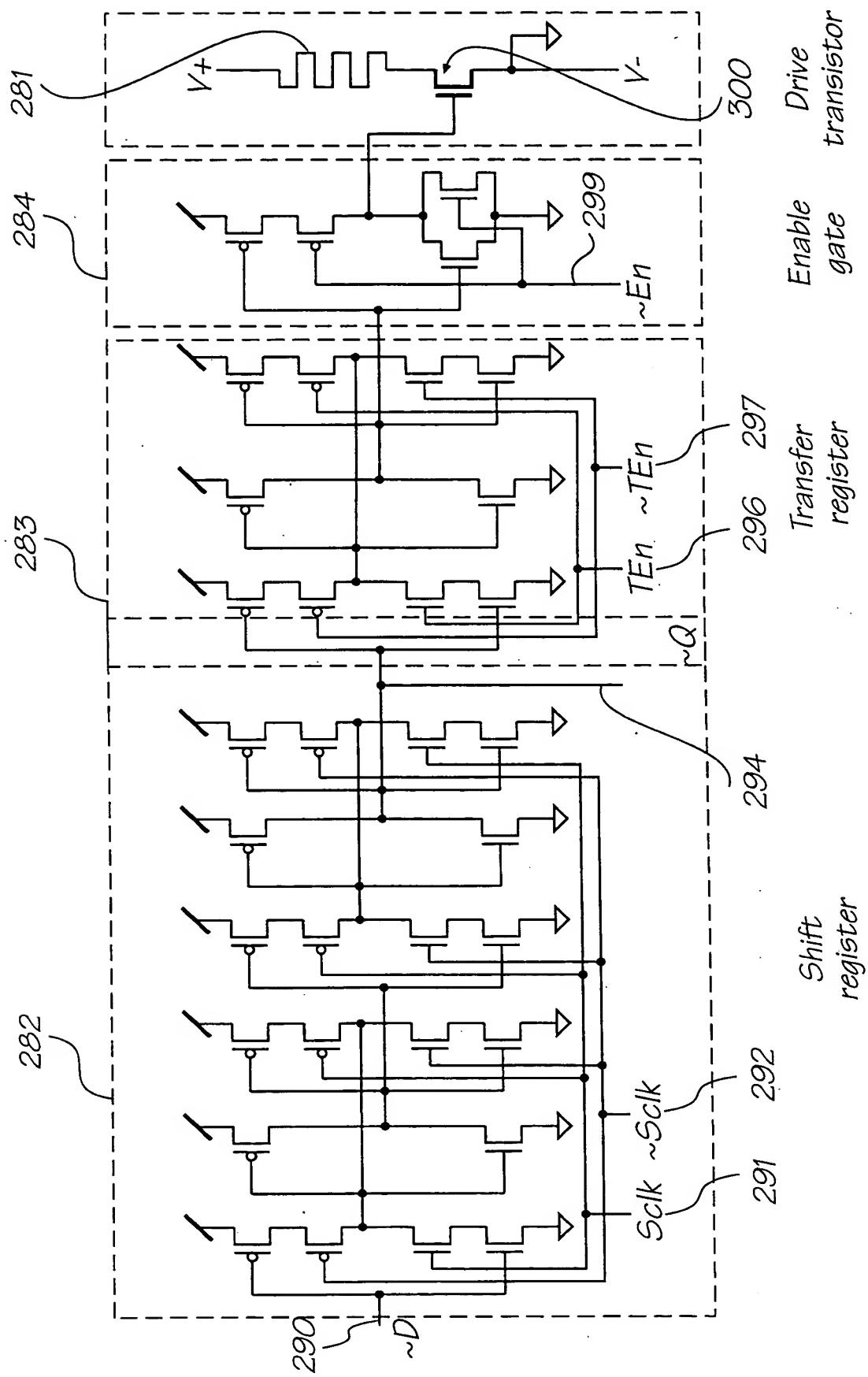


FIG. 77

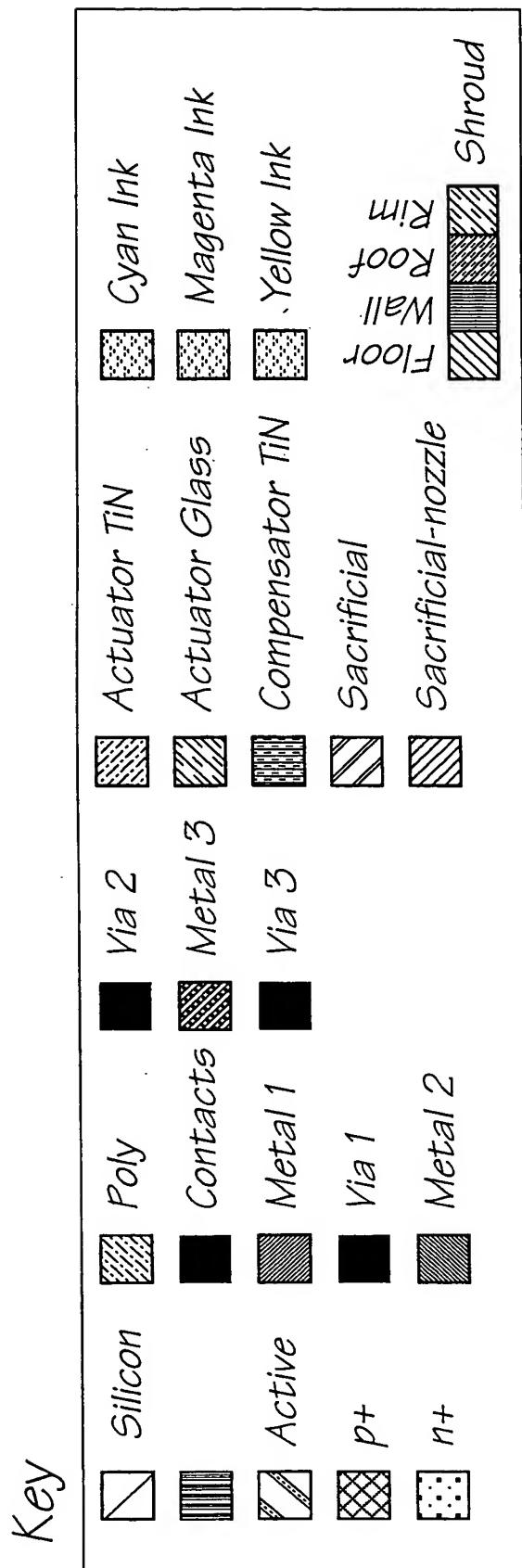


FIG. 78

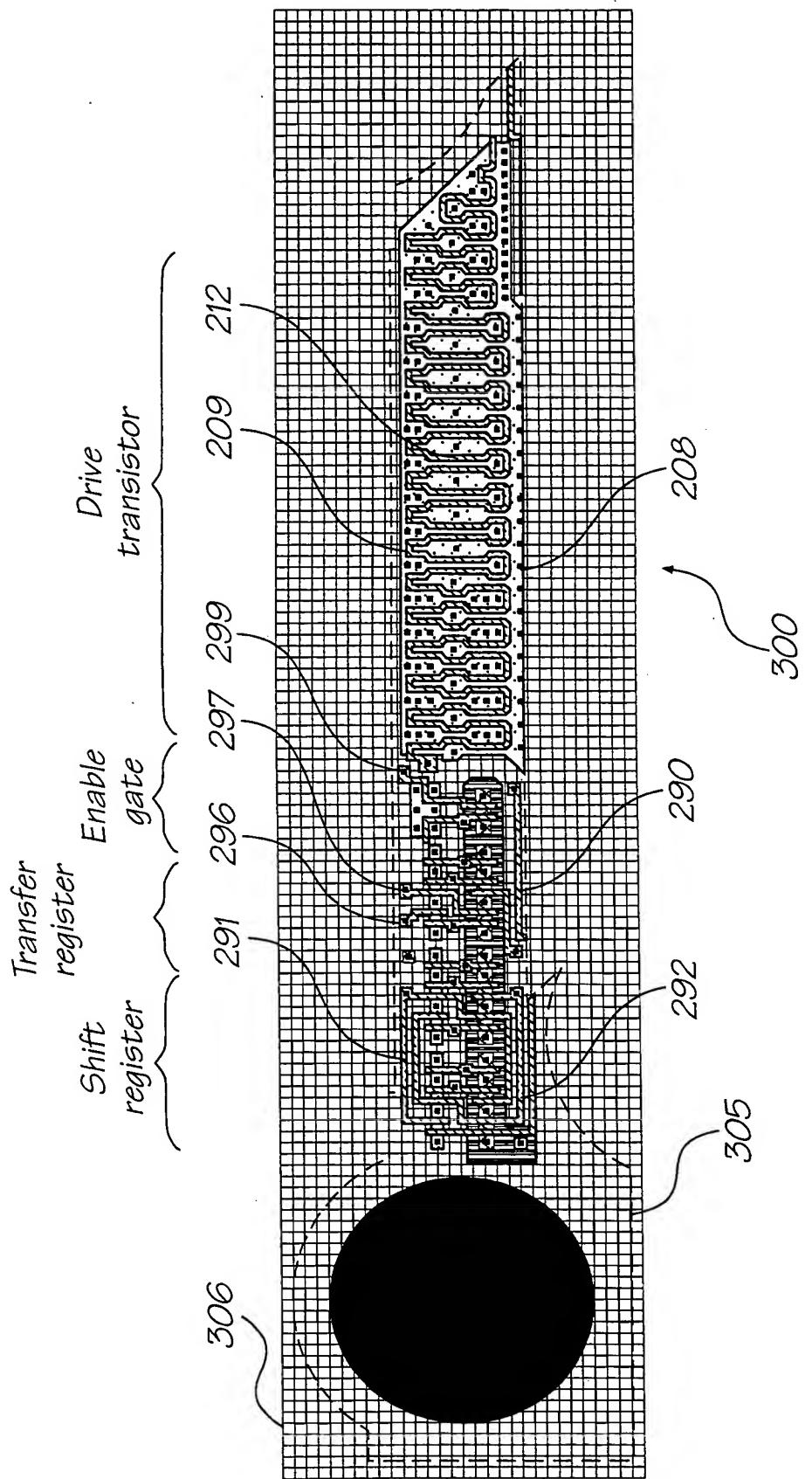


FIG. 79

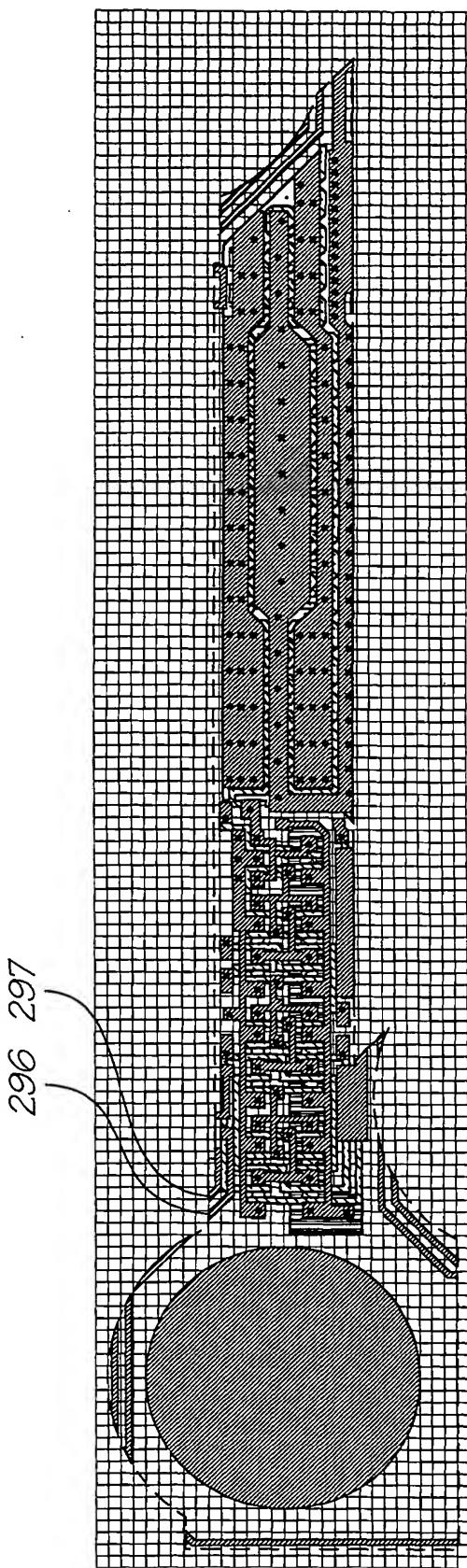


FIG. 80

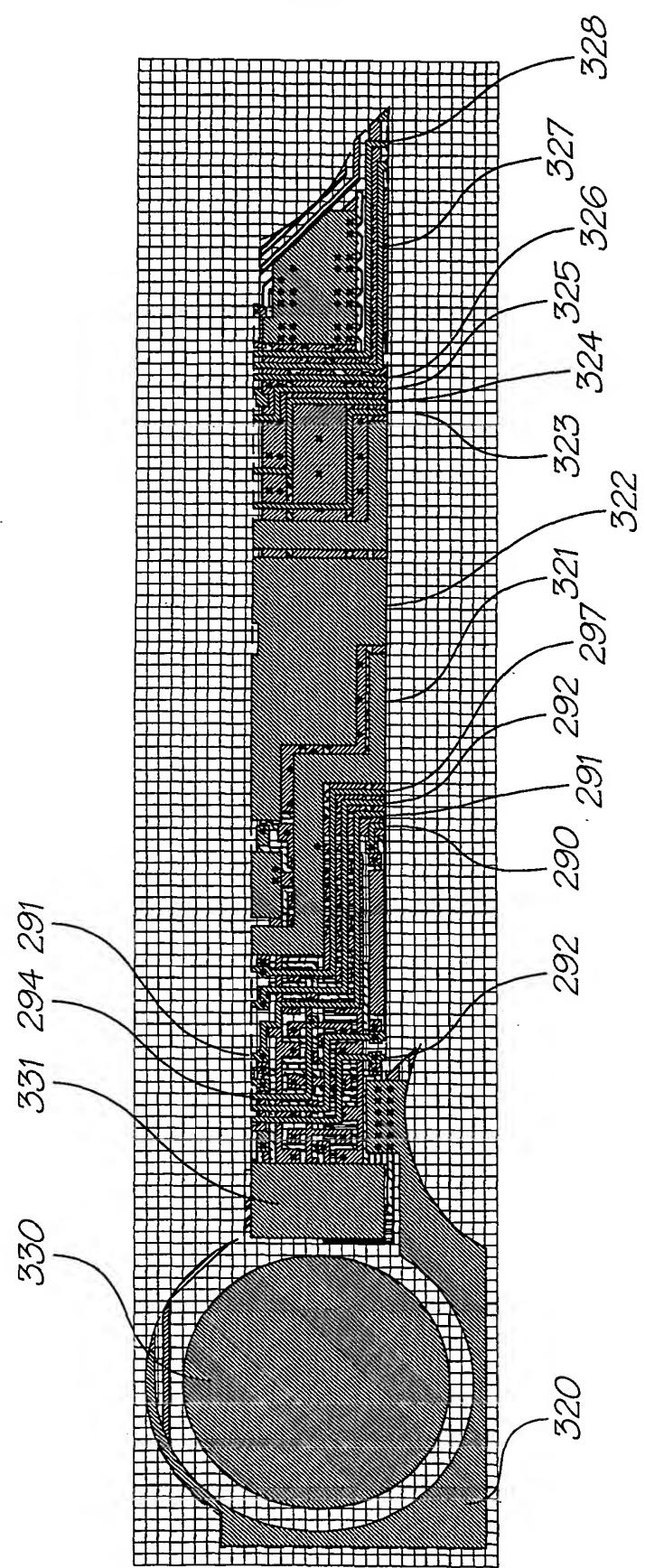


FIG. 81

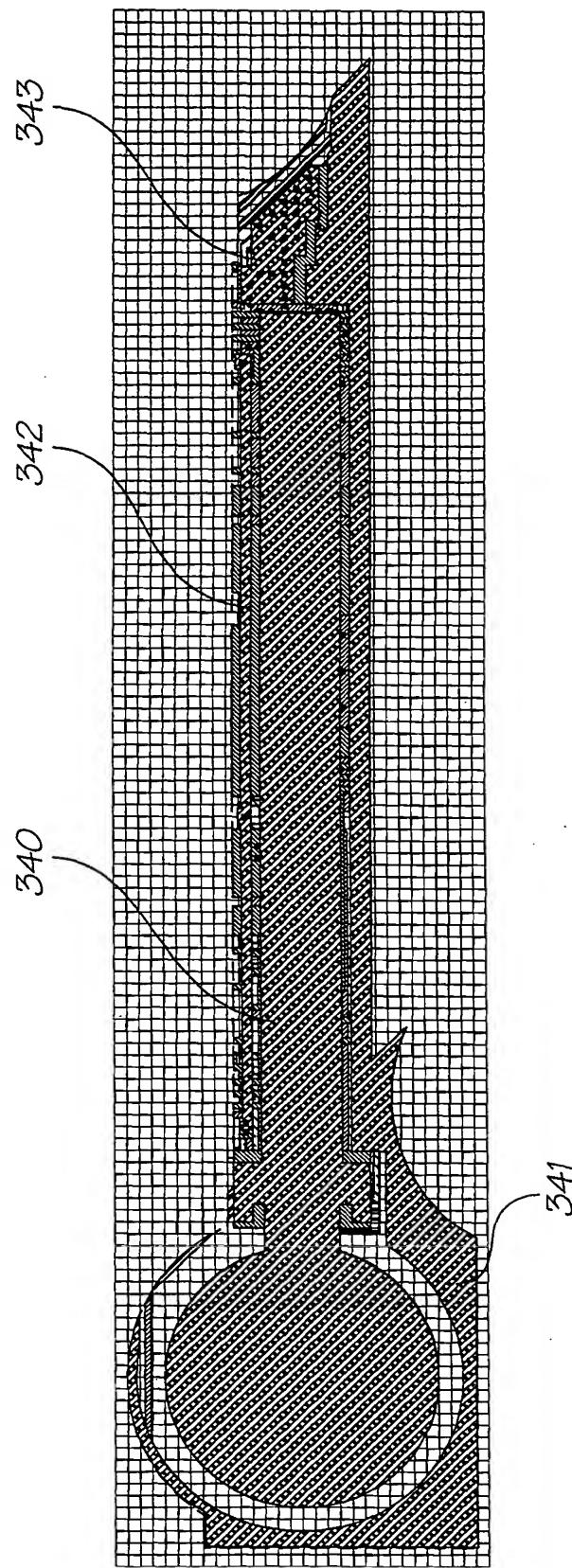


FIG. 82

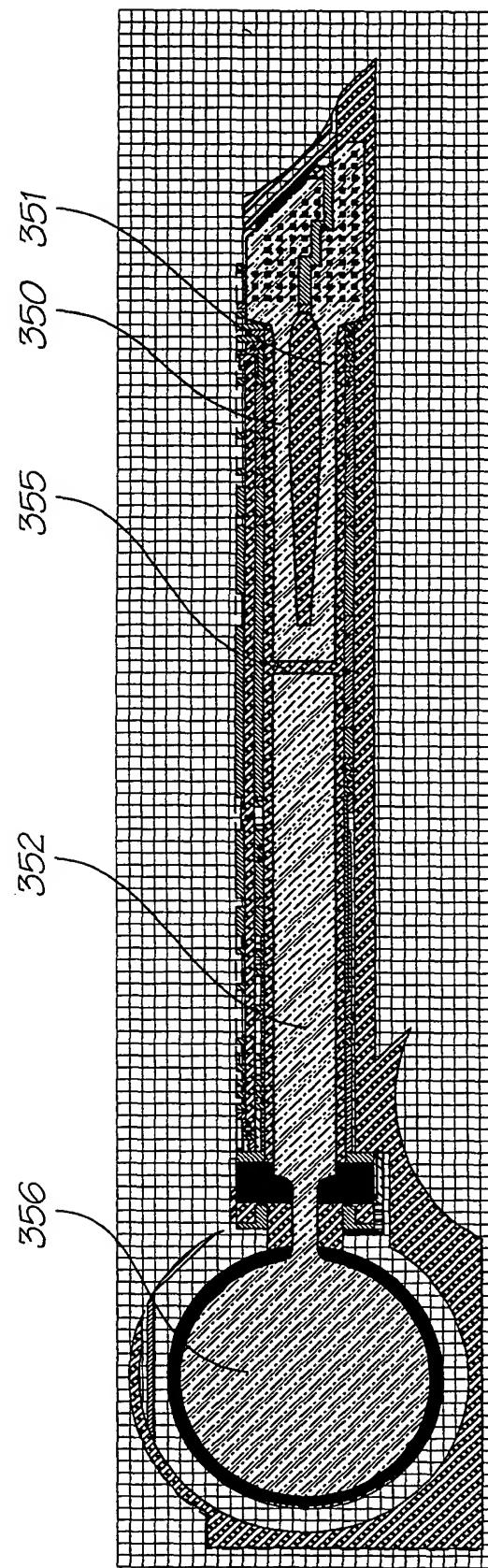


FIG. 83

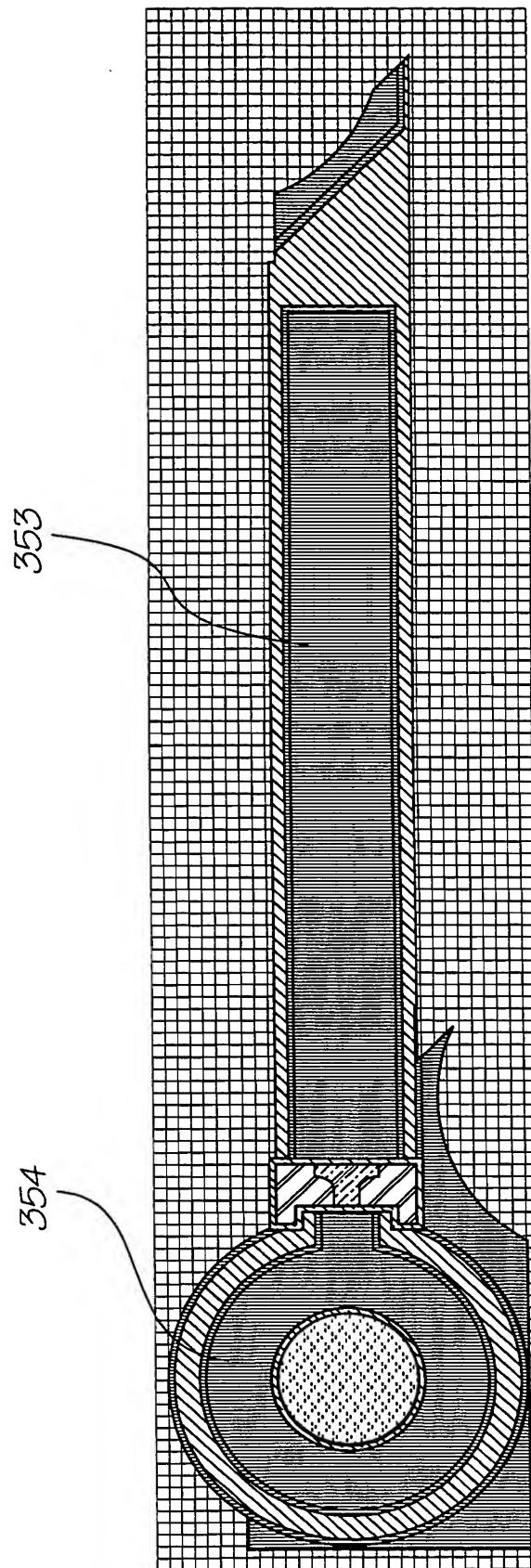


FIG. 84

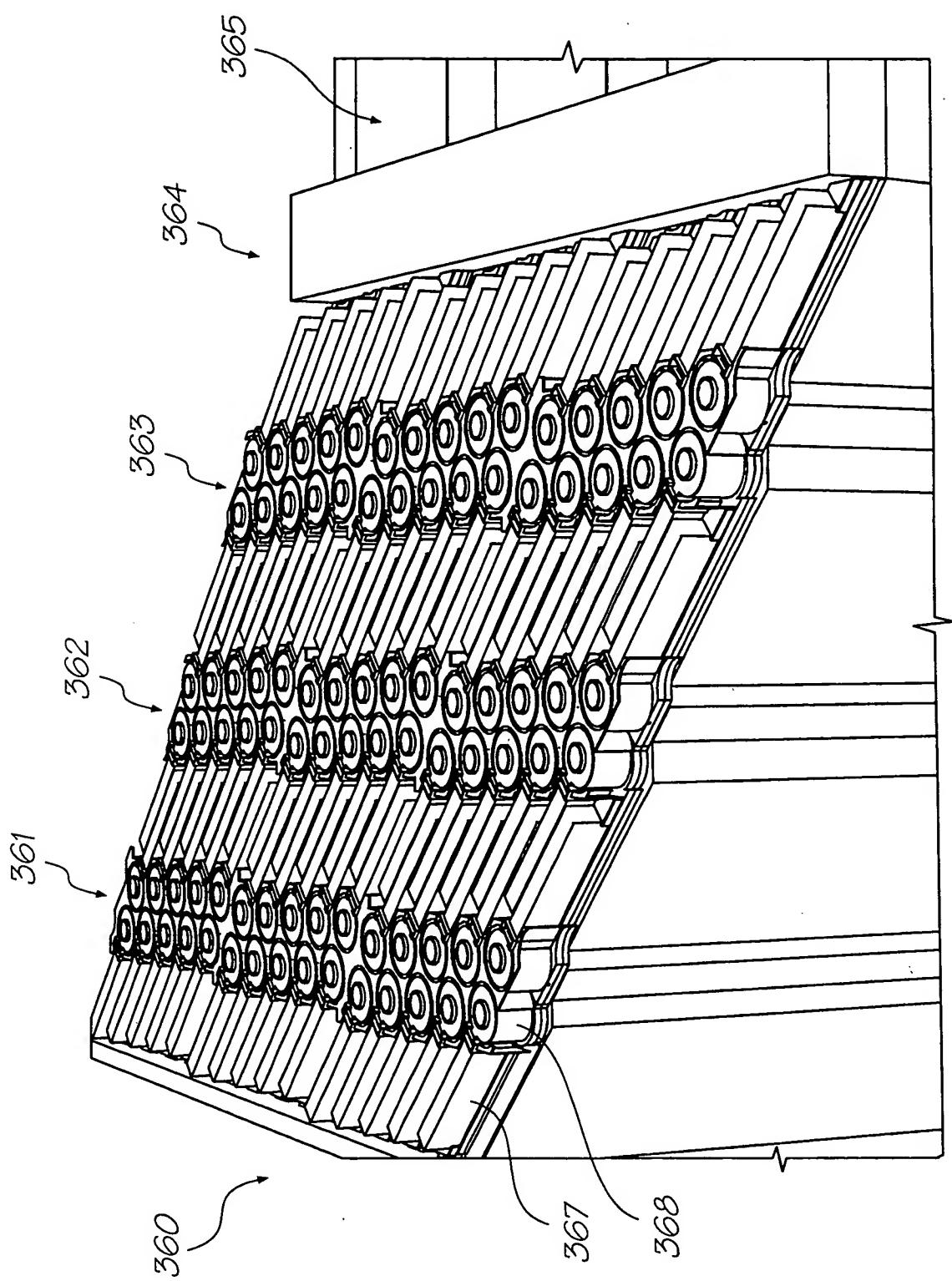


FIG. 85

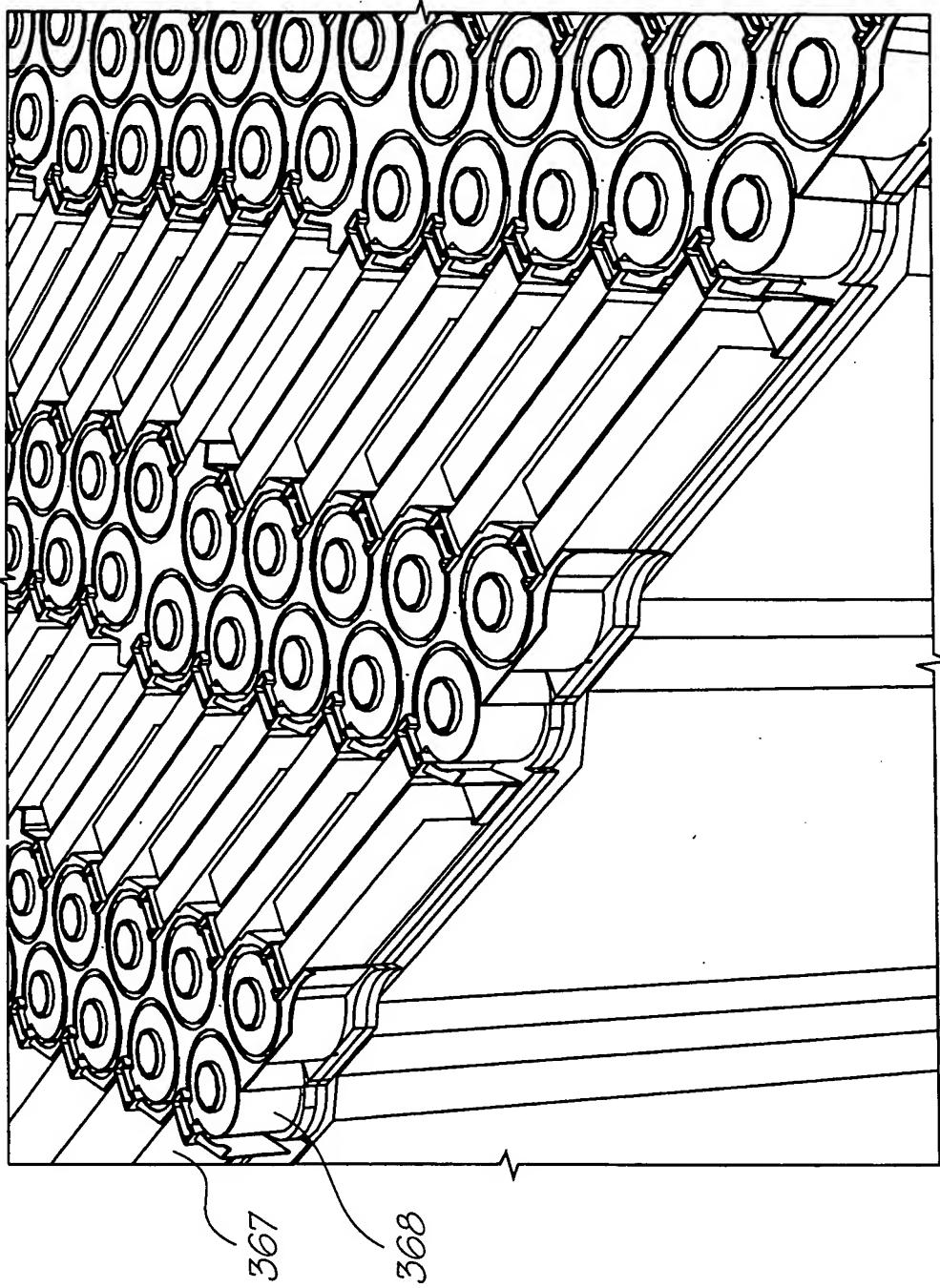
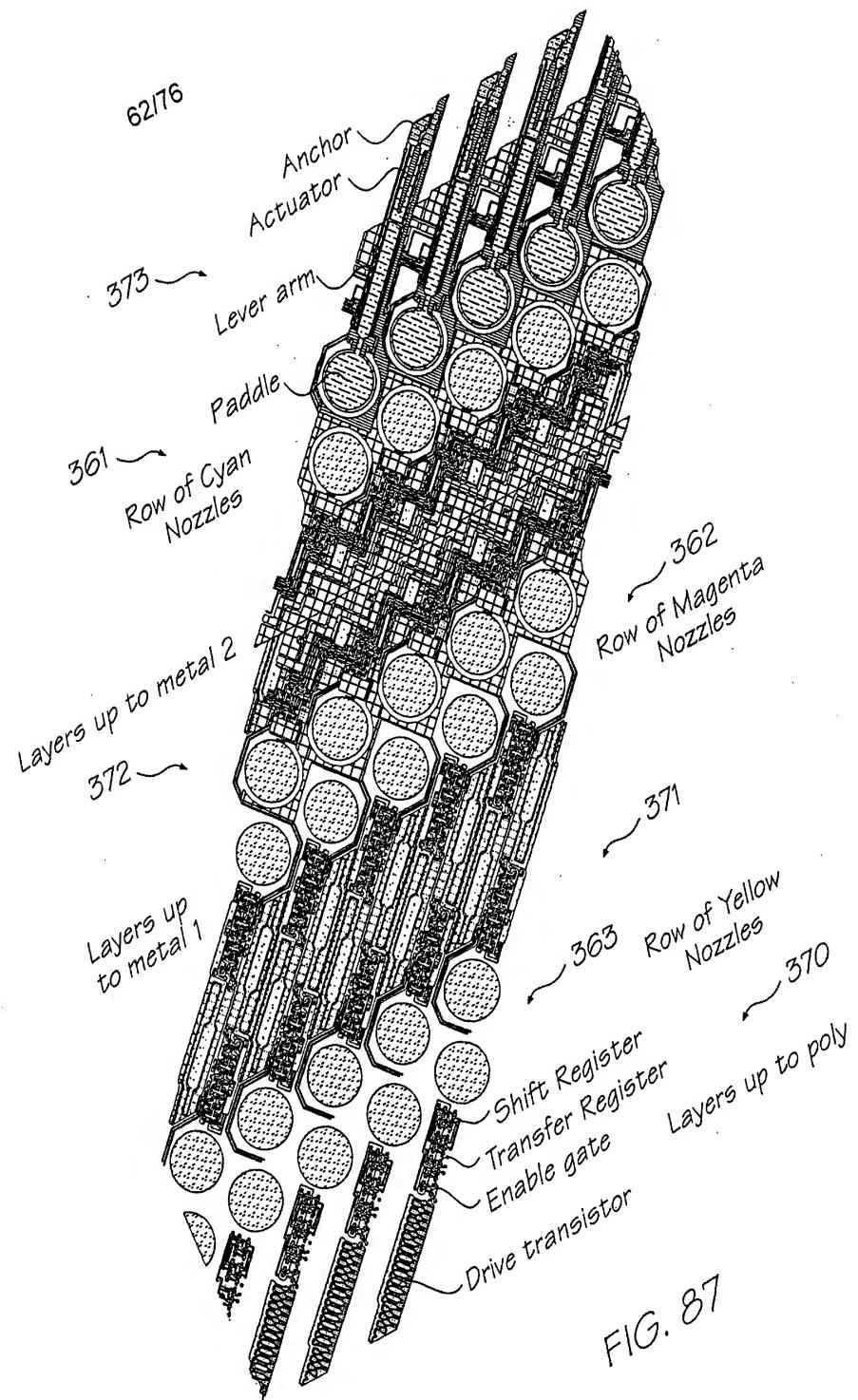


FIG. 86



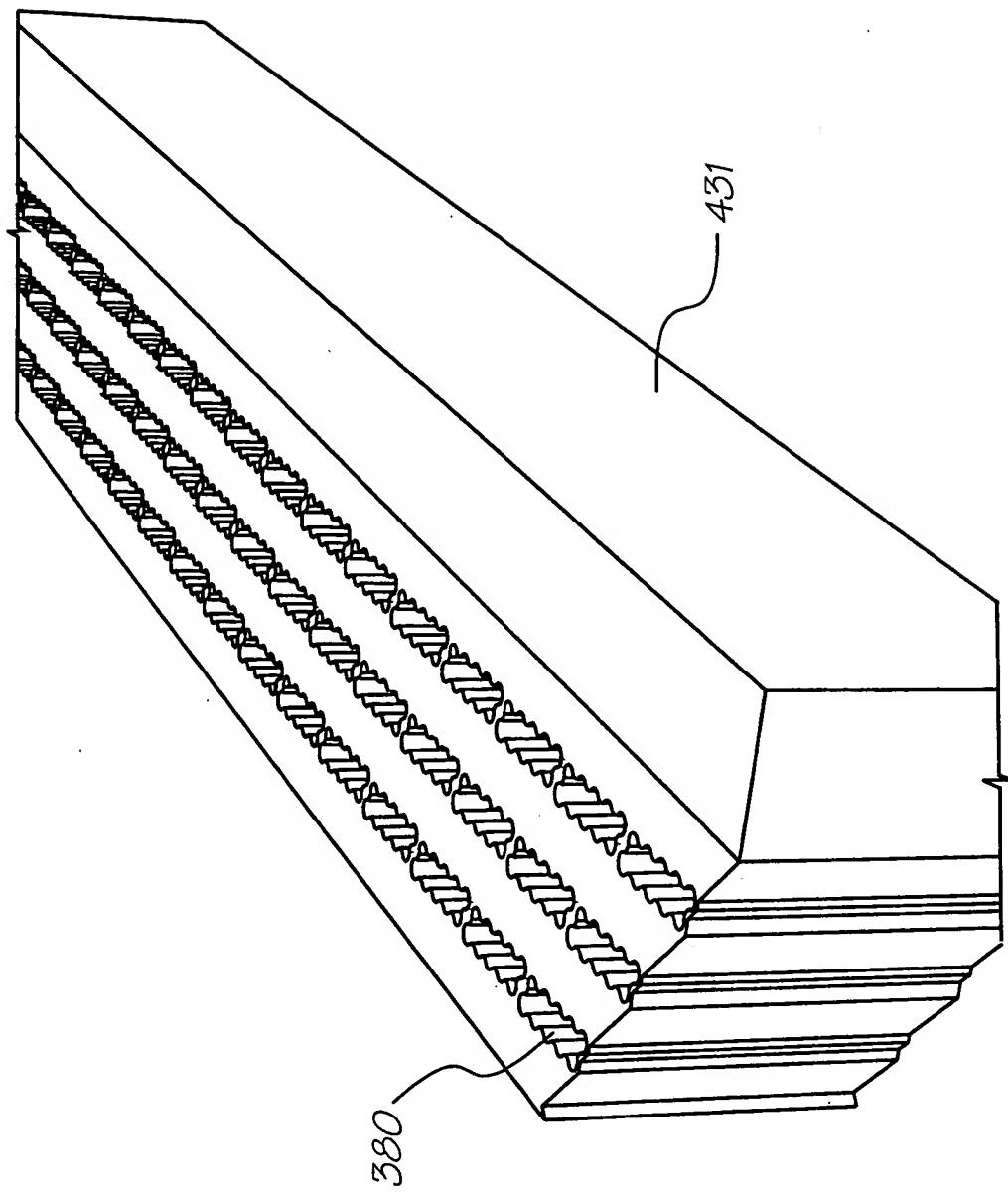


FIG. 88

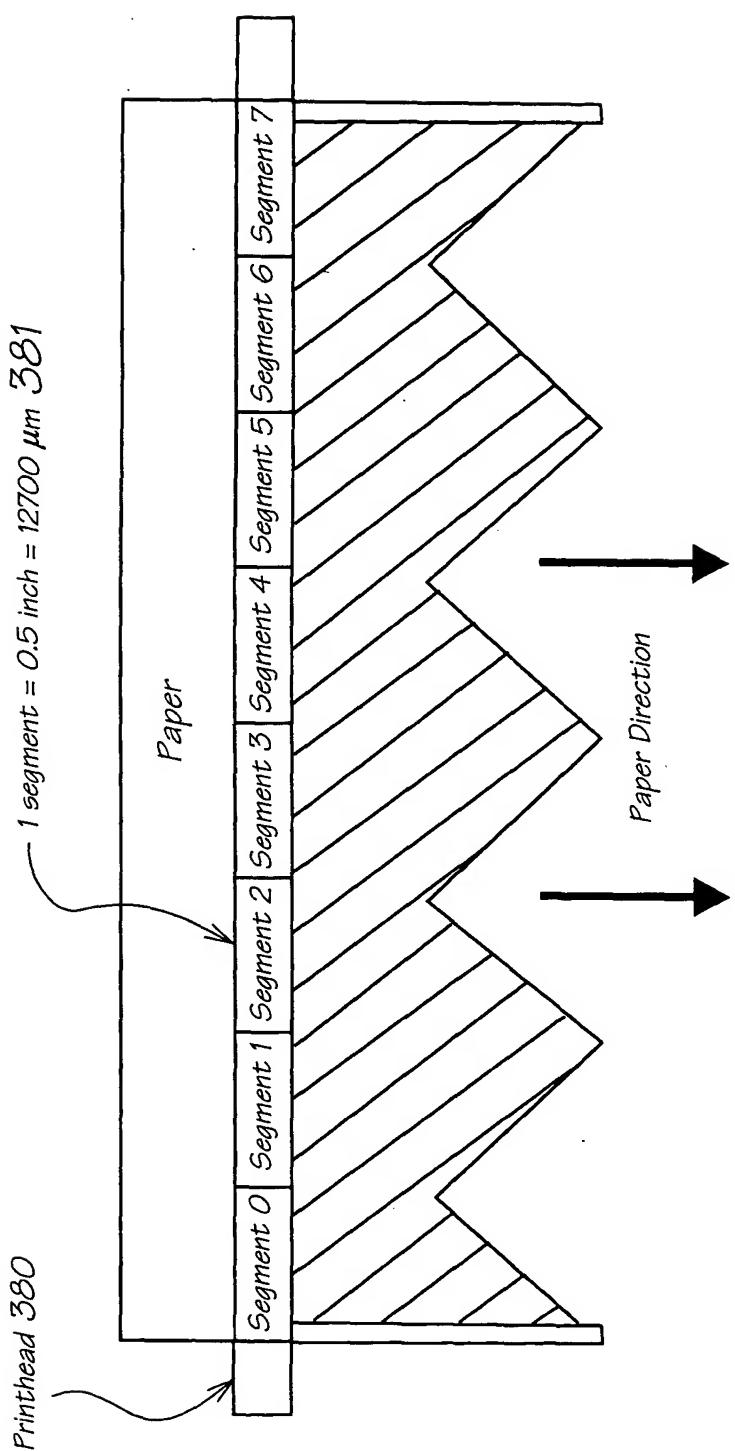
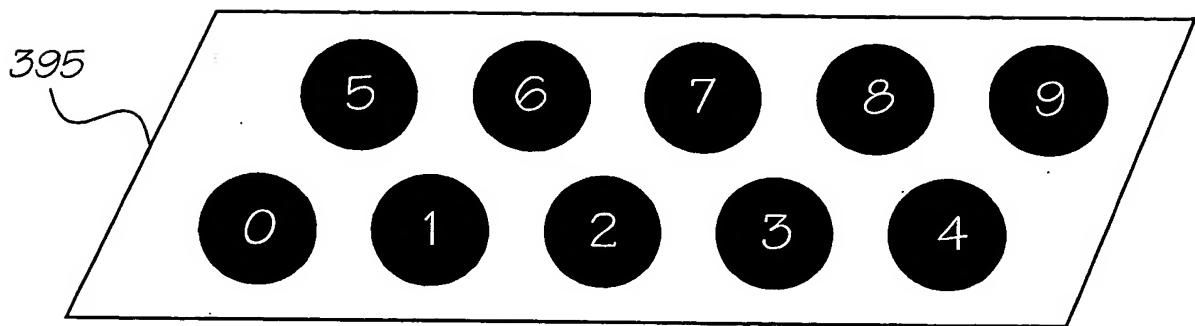


FIG. 89

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*A single pod, numbered by firing order*

FIG. 90

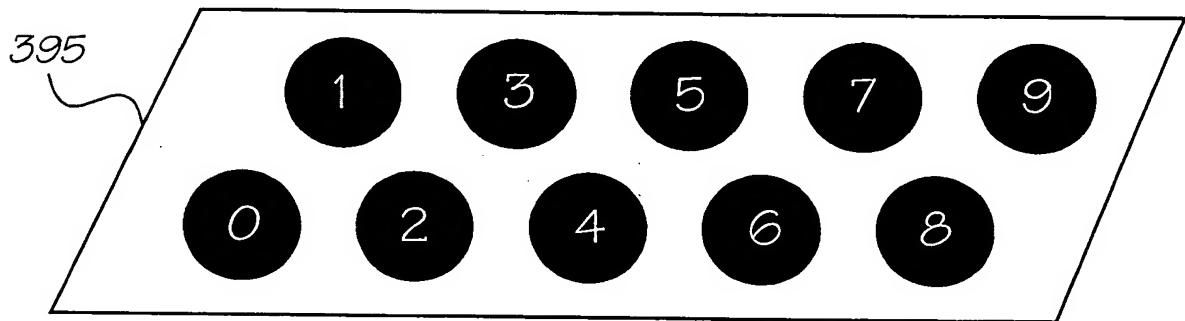


FIG. 91

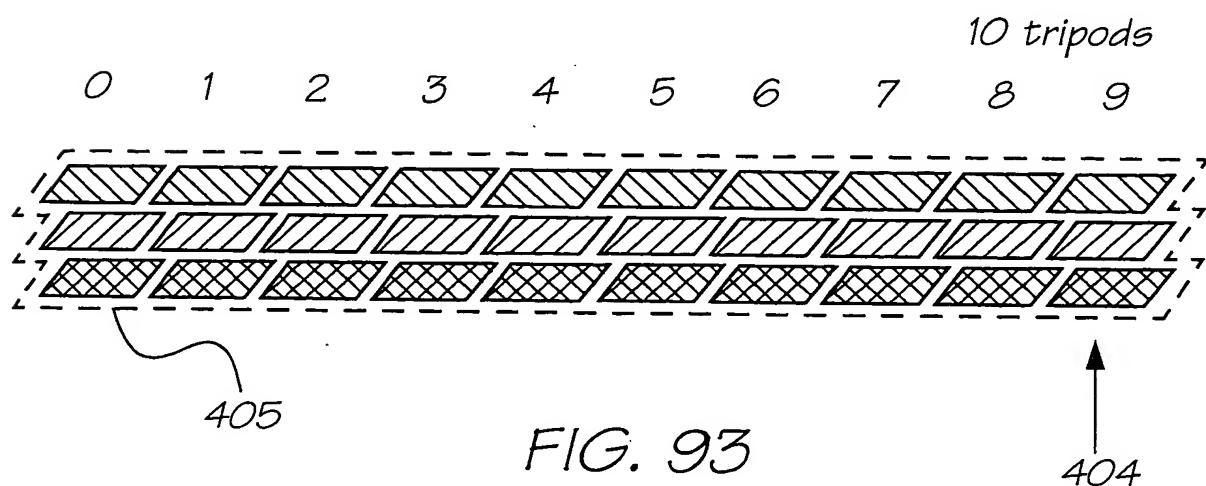


FIG. 93

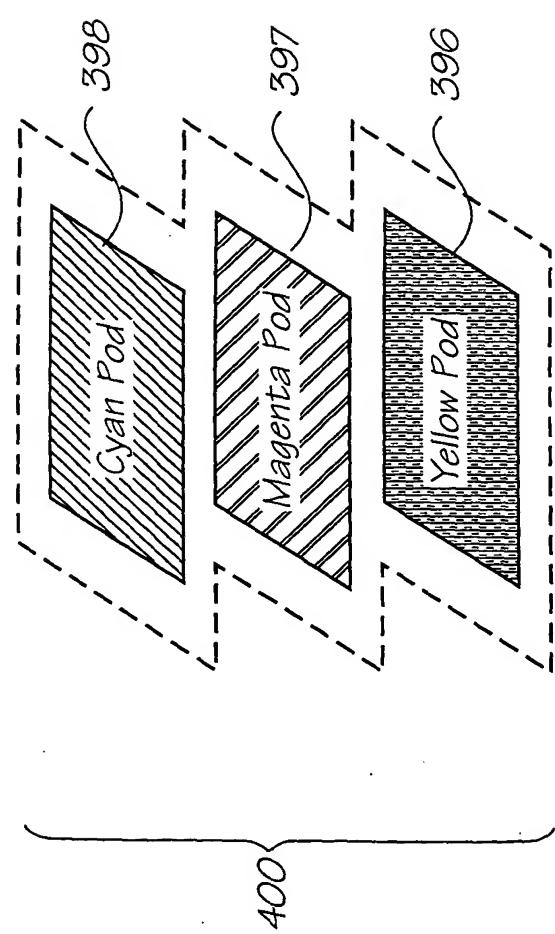


FIG. 92

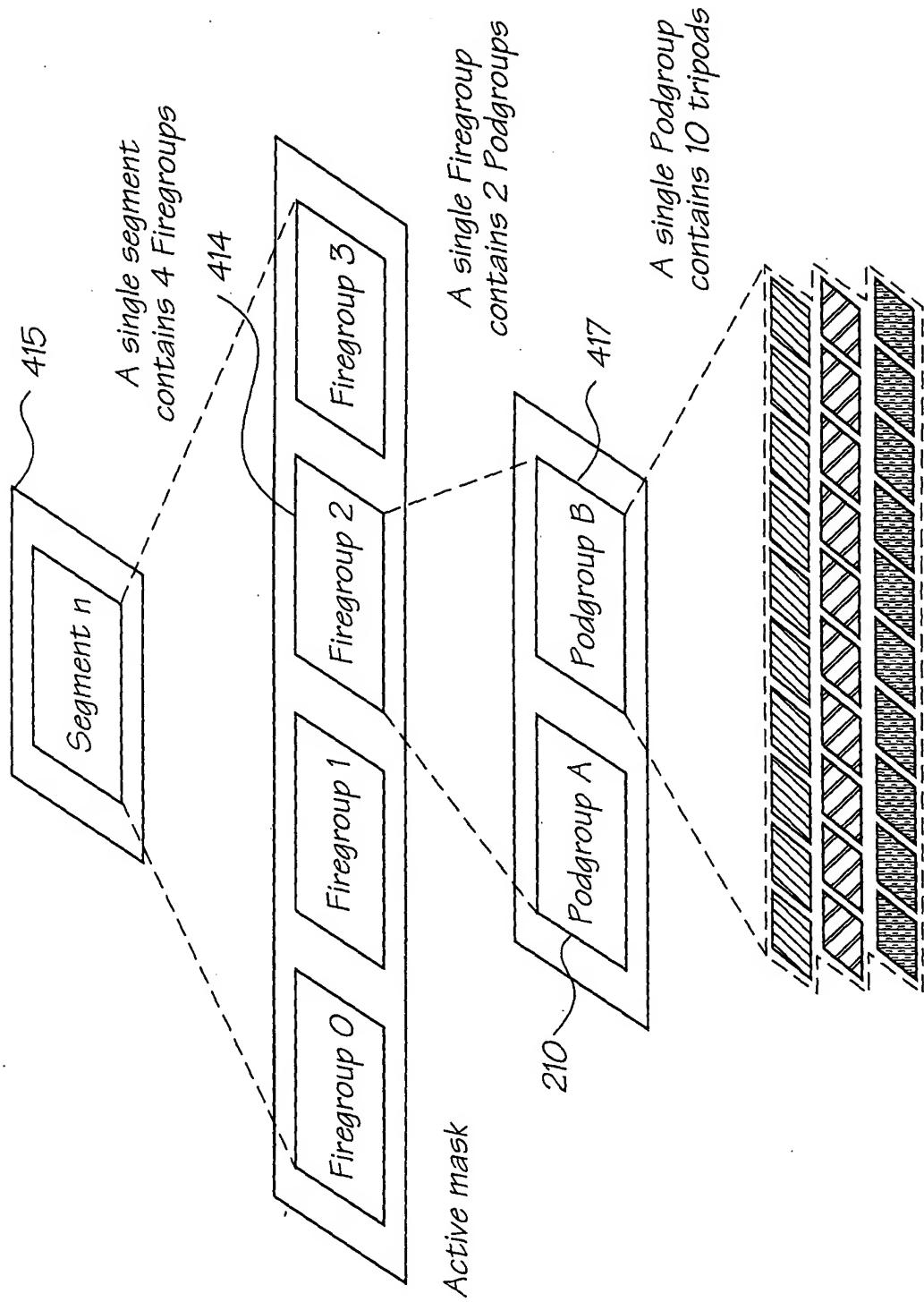


FIG. 94

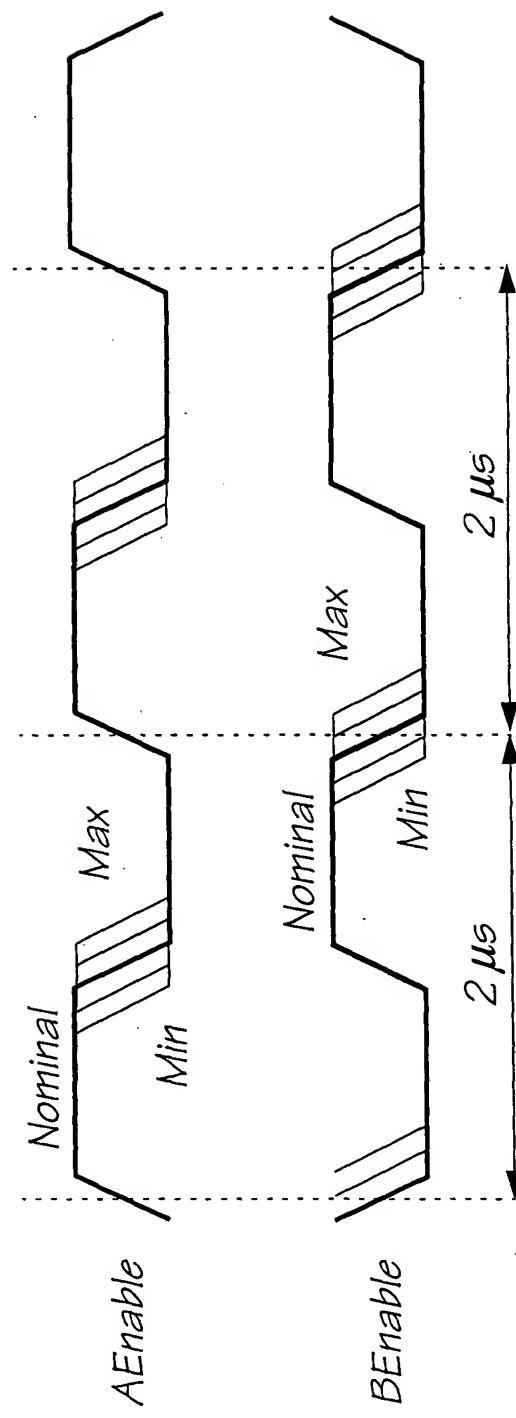


FIG. 95

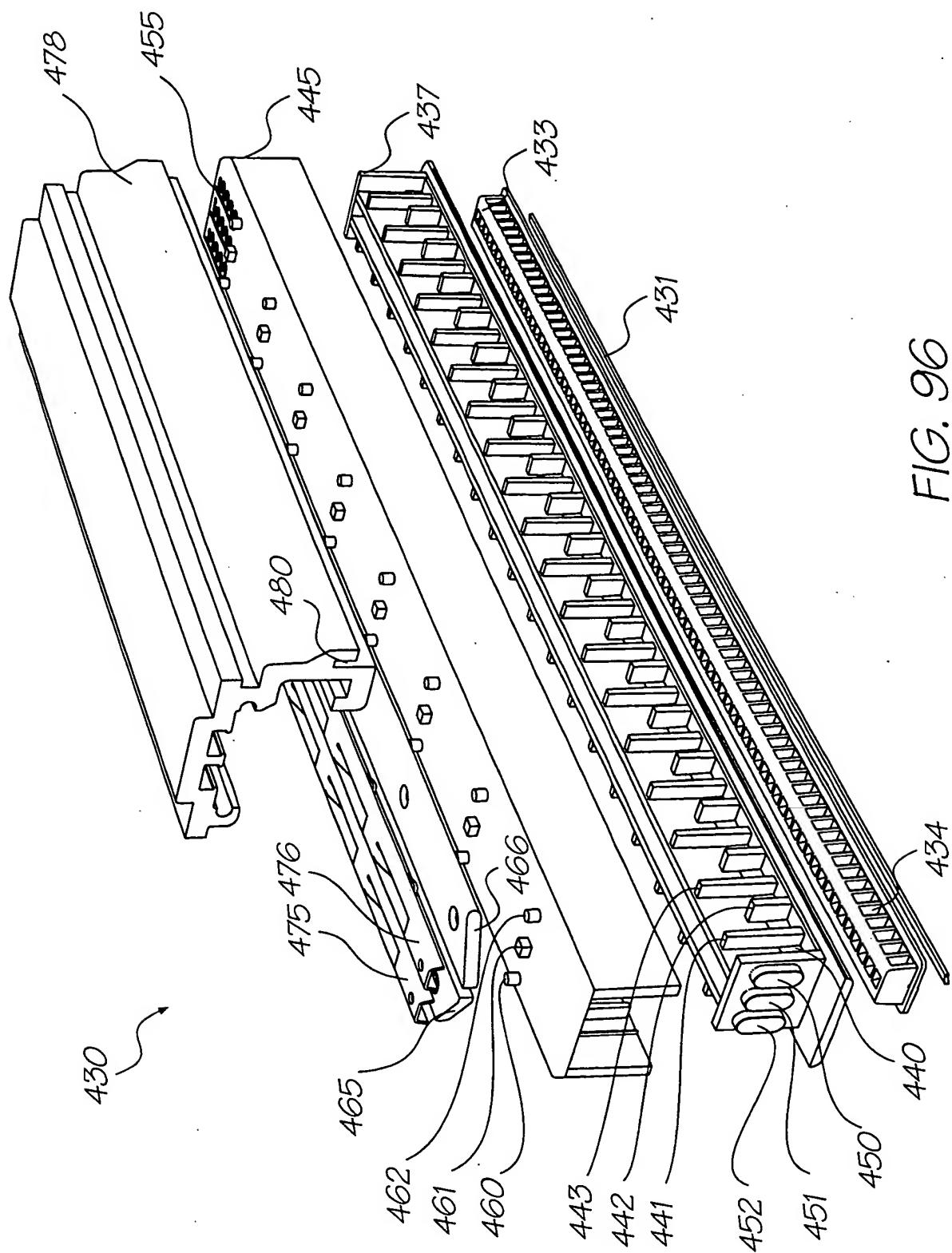


FIG. 96

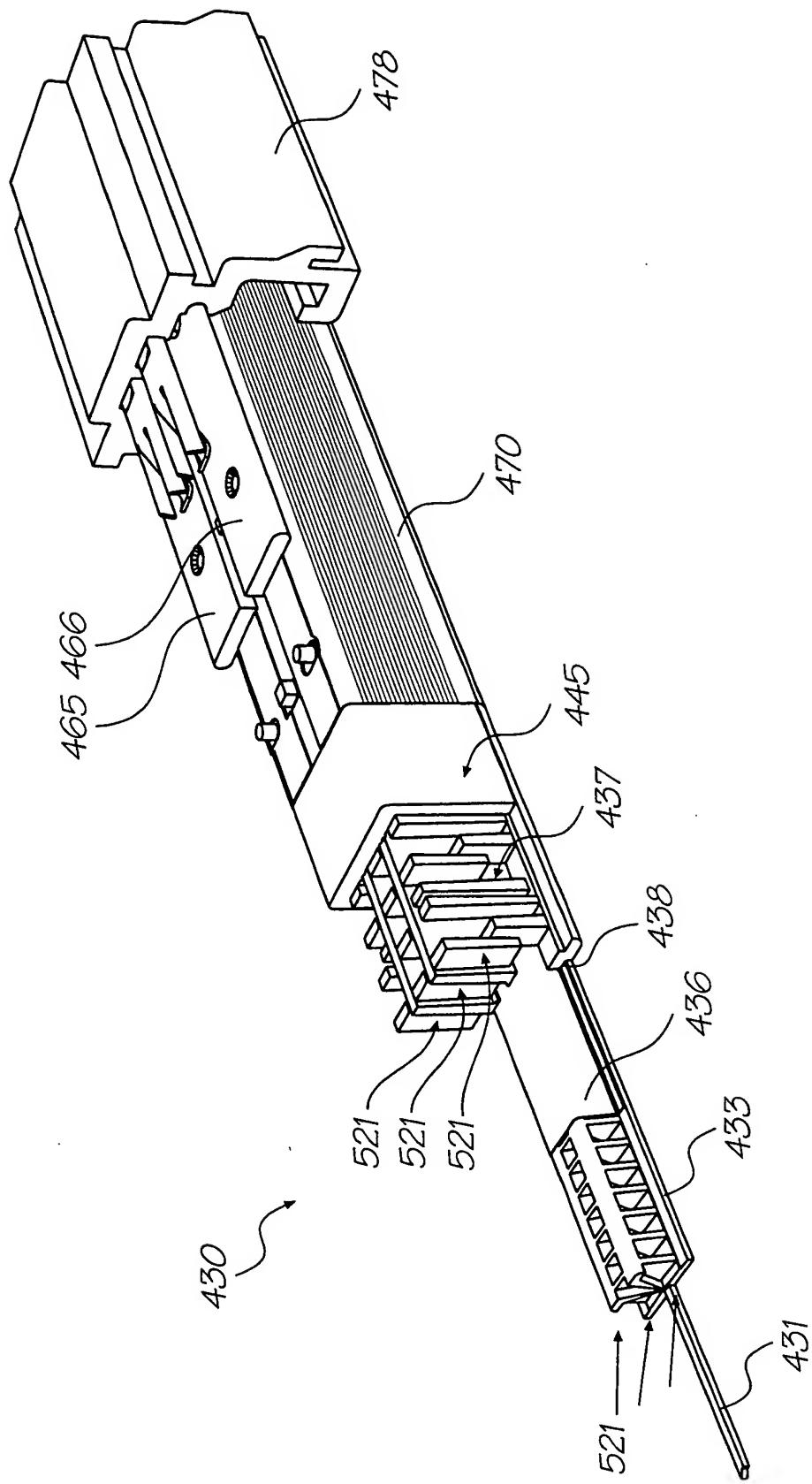
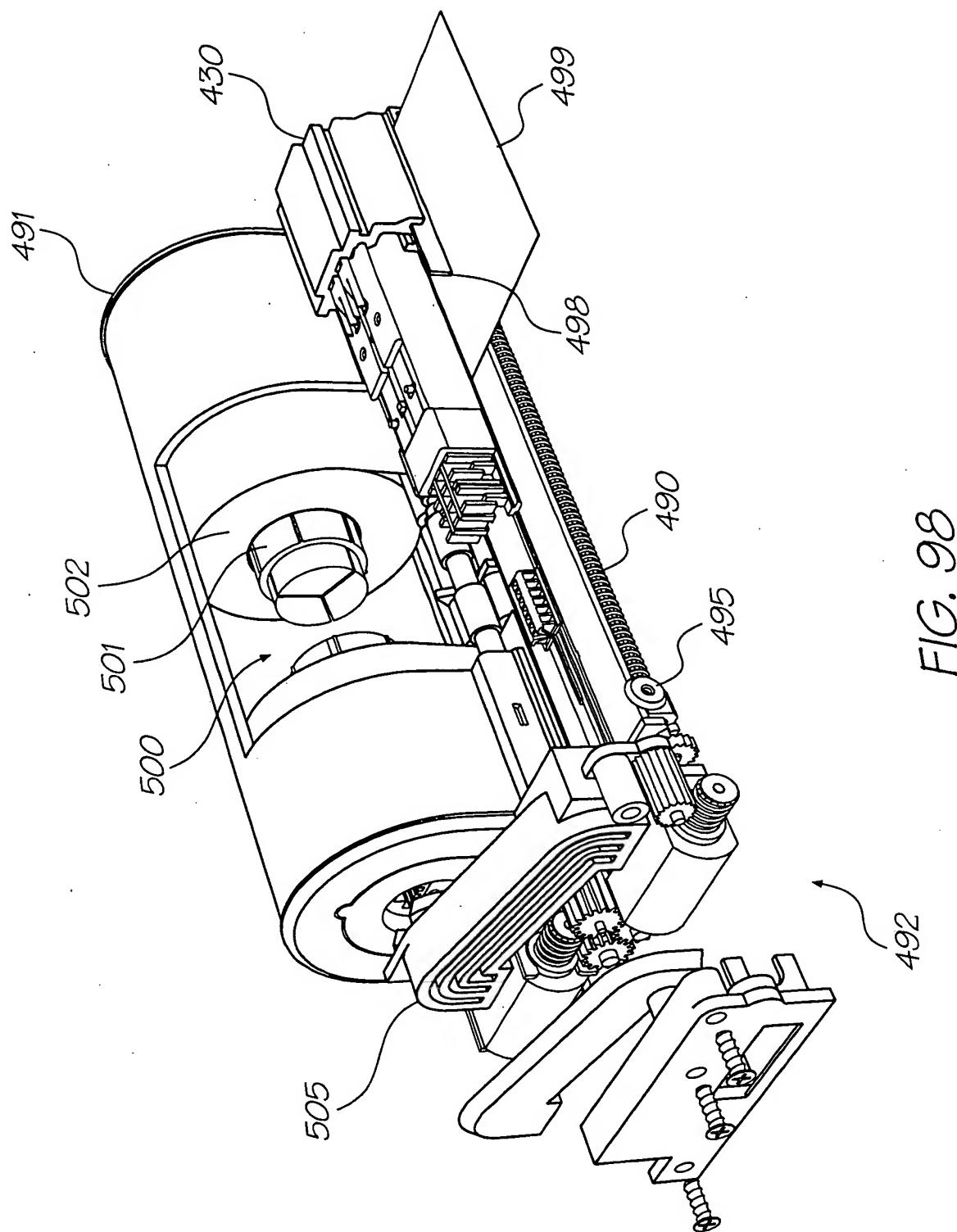


FIG. 97



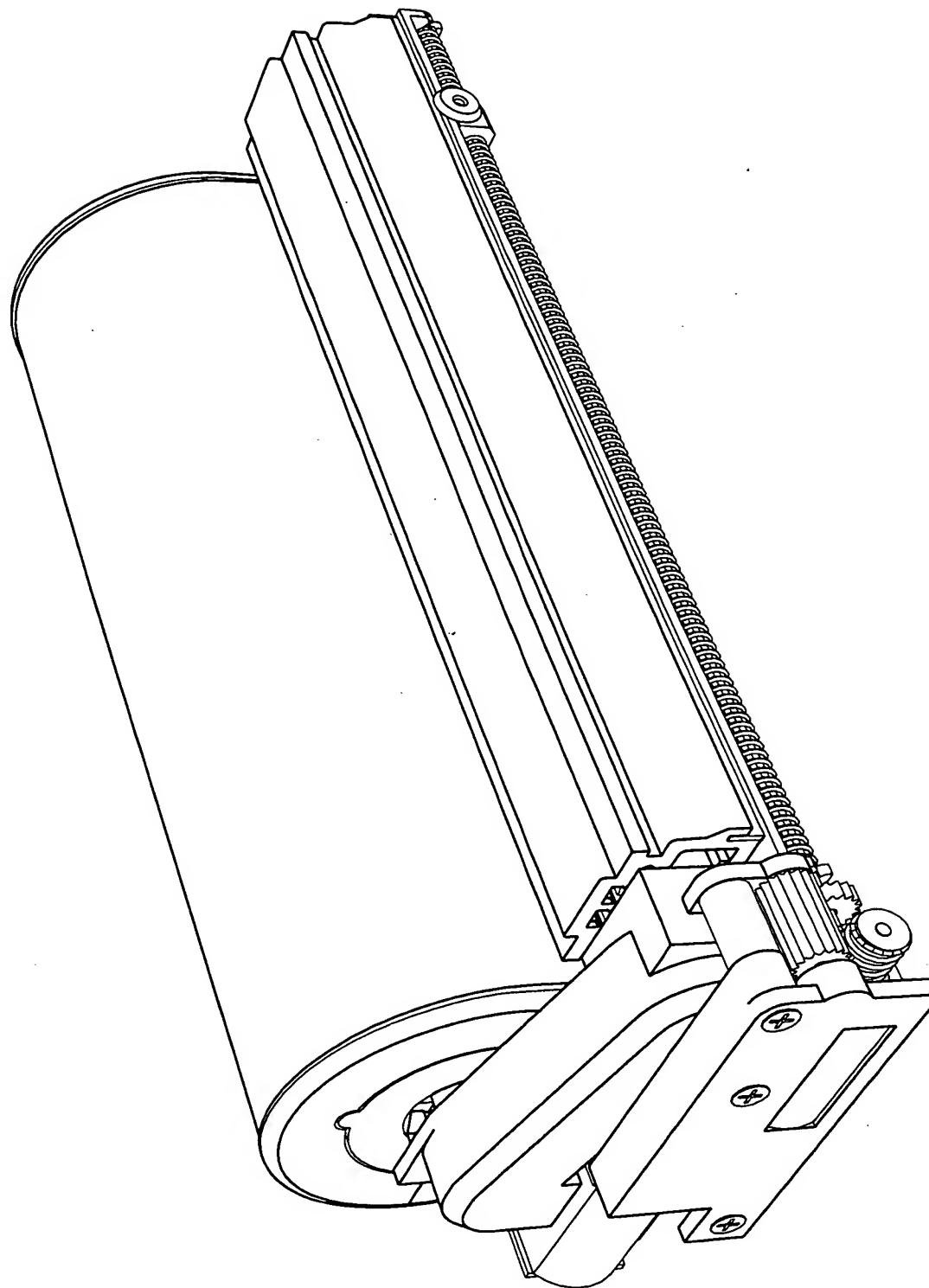


FIG. 99

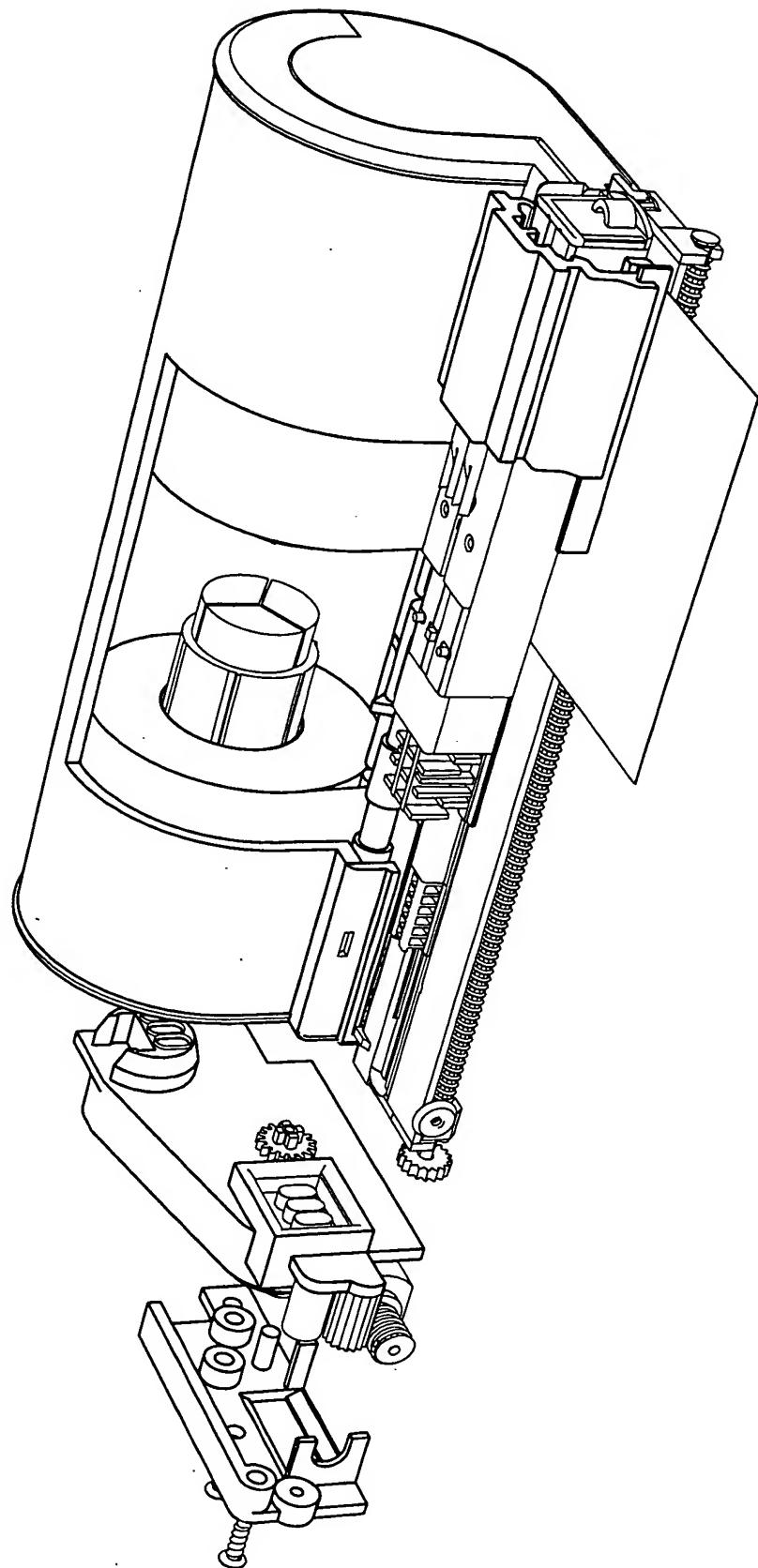


FIG. 100

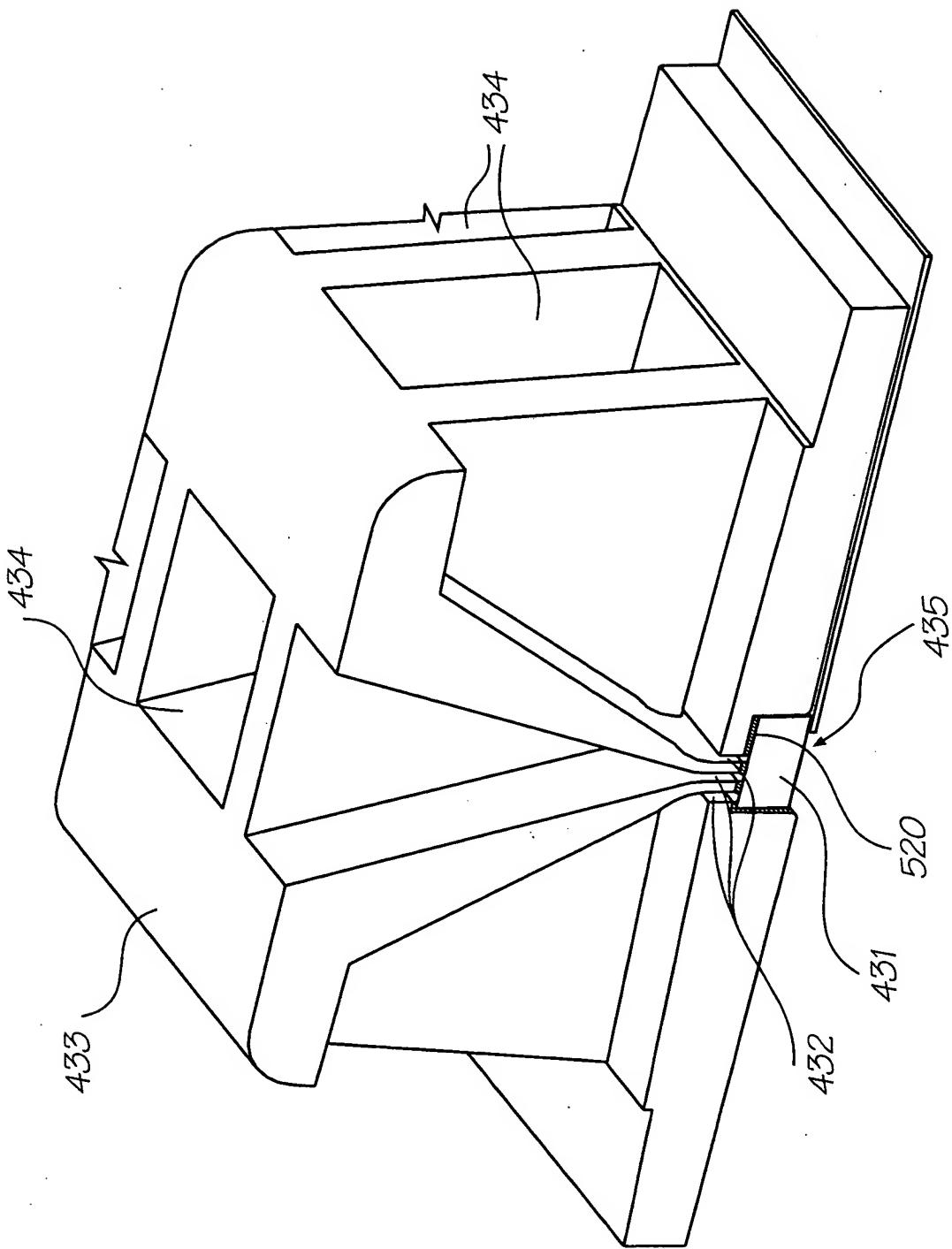


FIG. 101

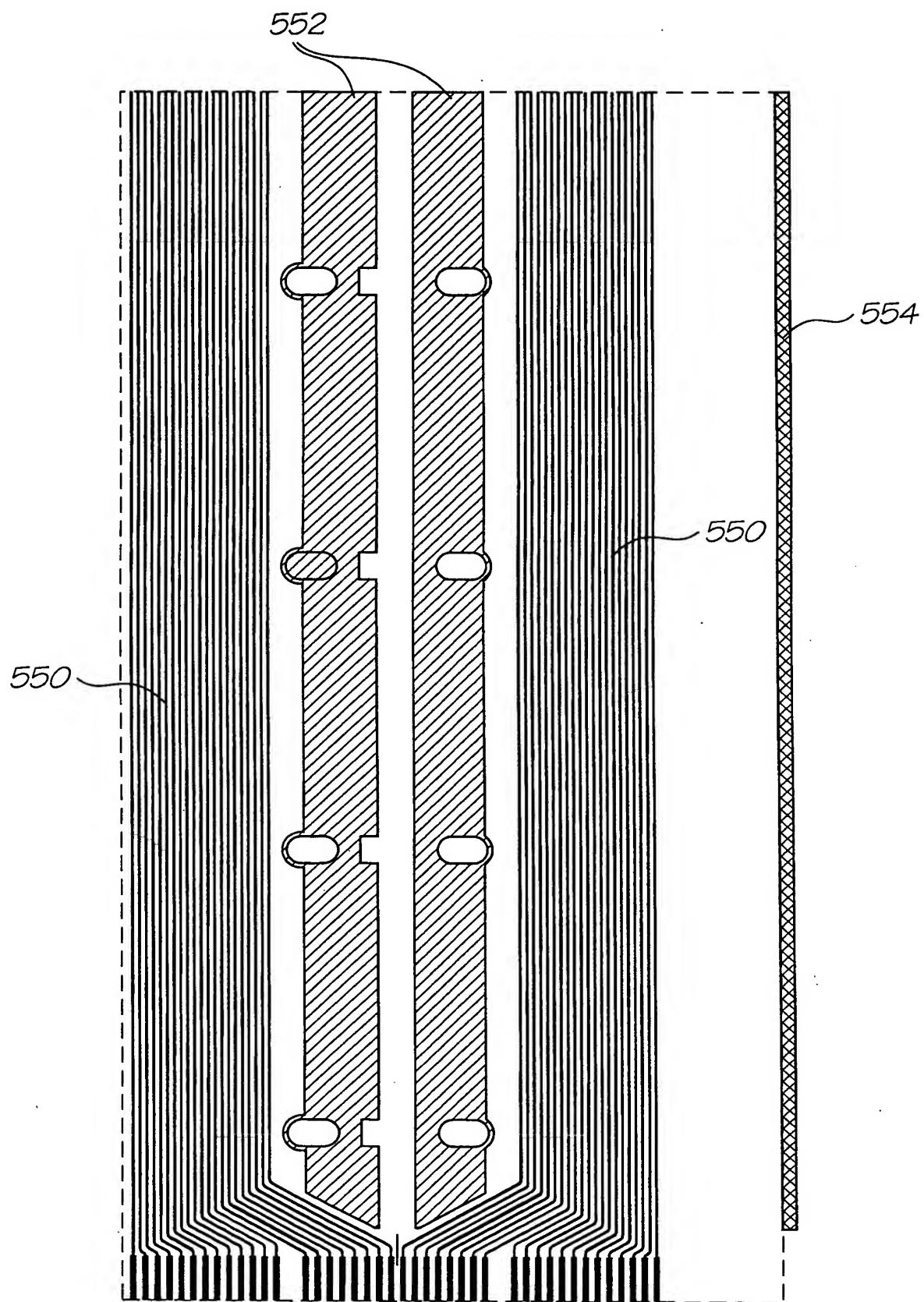


FIG. 102

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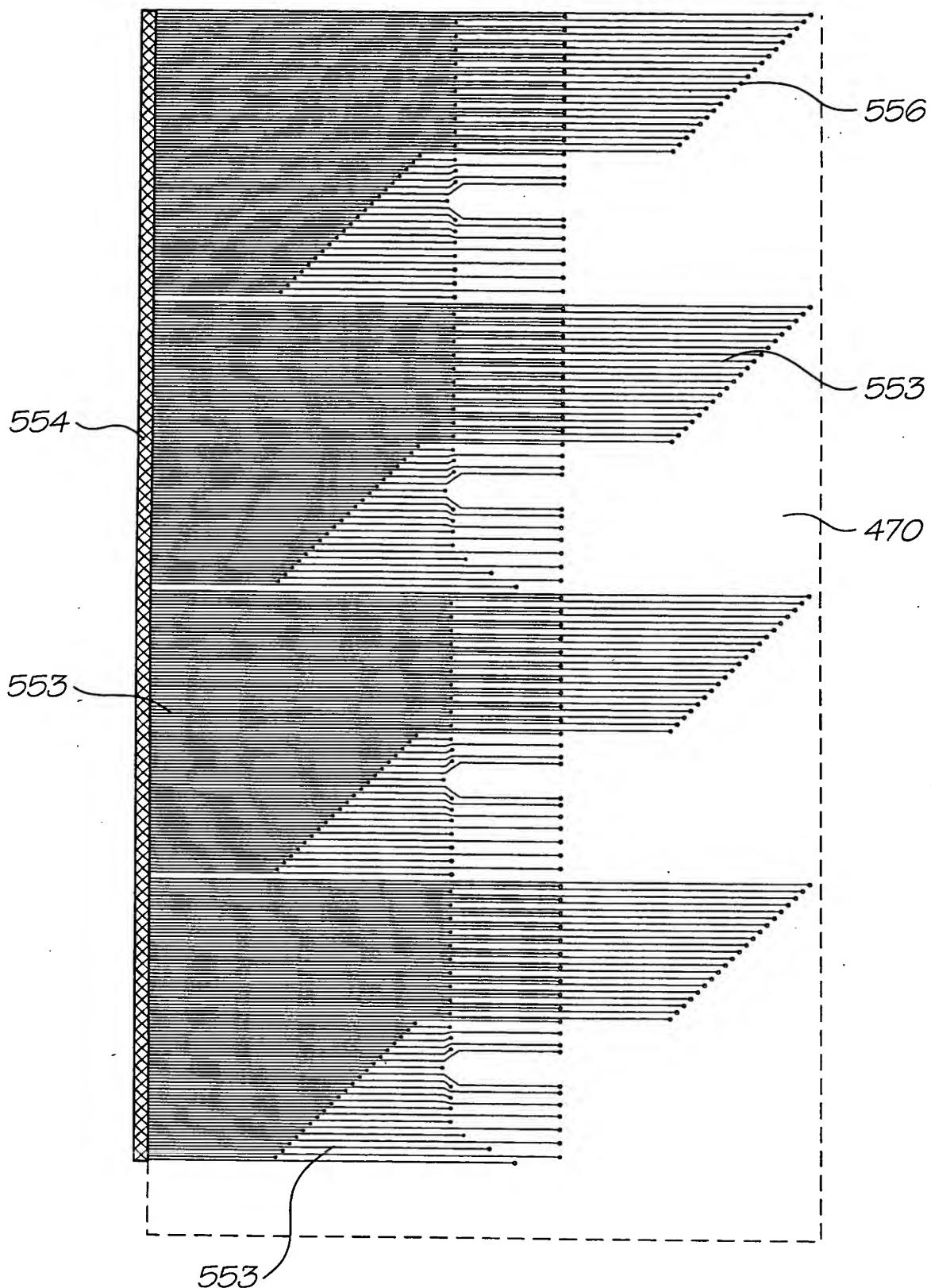


FIG. 103